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CONDEMNATION OF ANNE BOLEYN.

[With an Engraving by Kearney from a Painting by Smirk.]

"THOUGH unassisted by counsel, she defended herself with presence of mind; and the spectators could not forbear pronouncing her entirely innocent. Judgment, however, was given by the court, both against the queen and Lord Rocheford; and her verdict contained, that she should be burned or beheaded at the king's pleasure. When this dreadful sentence was pronounced she was not terrified, but lifting up her hands to heaven said, 'O Father! O Creator! thou who art the way, the truth, and the life, thou knowest that I have not deserved this fate.' And then turning to the judges, made the most pathetic declarations of her innocence."—*Hume*.

Her letter to the king before her trial, contains, says *Hume*, so much nature, and even elegance, as to deserve to be transmitted to posterity, without any alteration in the expression. It is as follows:

"Sir, your grace's displeasure and my imprisonment are things so strange unto me, as what to write or what to excuse I am altogether ignorant. Whereas you send unto me (willing me to confess a truth, and so obtain your favour) by such an one whom you know to be mine ancient professed enemy, I no sooner received this message by him than I rightly conceived your meaning; and if, as you say, confessing a truth indeed may procure my safety, I shall with all willingness and duty perform your command.

"But let not your grace ever imagine that your poor wife will ever be brought to acknowledge a fault where not so much as a thought thereof preceded. And, to speak a truth, never prince had wife more loyal in all duty, and in all true affection, than you have ever found in Anne Boleyn: with which name and place I could willingly have contented myself, if God and your grace's pleasure had been so pleased. Neither did I at any time so far forget myself in my exaltation or received queenship, but that I always looked for such an alteration as I now find; for the ground of my preferment being on no surer foundation than your grace's fancy, the least alteration I knew was fit and sufficient to draw that fancy to some other object. You have chosen me from a low estate to be your queen and companion, far beyond my desert or desire. If then you found me

worthy of such honour, good your grace let not any light fancy, or bad counsel of mine enemies, withdraw your princely favour from me: neither let that stain, that unworthy stain, of a disloyal heart towards your good grace, ever cast so foul a blot on your most dutiful wife, and the infant princess your daughter. Try me, good king, but let me have a lawful trial, and let not my sworn enemies sit as my accusers and judges; yea let me receive an open trial, for my truth shall fear no open shame; then shall you see either mine innocence cleared, your suspicion and conscience satisfied, the ignominy and slander of the world stopped, or my guilt openly declared. So that whatsoever God or you may determine of me, your grace may be freed from an open censure; and mine offence being so lawfully proved, your grace is at liberty both before God and man not only to execute worthy punishment on me as an unlawful wife, but to follow your affection already settled on that party for whose sake I am now as I am, whose name I could some good while since have pointed unto, your grace not being ignorant of my suspicion therein.

"But if you have already determined of me, and that not only my death, but an infamous slander, must bring you the enjoying of your desired happiness, then I desire of God that he will pardon your great sin therein, and likewise mine enemies, the instruments thereof, and that he will not call you to a strict account for your unprincely and cruel usage of me, at his general judgment-seat, where both you and myself must shortly appear, and in whose judgment I doubt not (whatsoever the world may think of me) mine innocence shall be openly known and sufficiently cleared.

"My last and only request shall be, that myself may only bear the burden of your grace's displeasure, and that it may not touch the innocent souls of those poor gentlemen who (as I understand) are likewise in strait imprisonment for my sake. If ever I have found favour in your sight, if ever the name of Anne Boleyn hath been pleasing in your ears, then let me obtain this request, and I will so leave to trouble your grace any farther, with mine earnest prayers to the Trinity to have your grace in his good keeping, and to direct you in all your actions. From my doleful prison in the Tower, this sixth of May: Your most loyal and ever faithful wife,—ANNE BOLEYN."

From Blackwood's Magazine.

THE WISHING-GATE.

"LET the whole earth praise thee, oh Lord! from the rising up of the sun, to the going down of the same; for glorious and bountiful are thy works, my God and my Saviour, and may my soul ever declare the greatness and goodness of thy name!" said old Michael Raeburn, as he closed the door of his humble cottage, and stepped forth and met the face—the rejoicing and happy face—of creation, on a lovely morning in August, when nature appeared in all the freshness and calm beauty that must have delighted our first parents on their awakening each blest morning in Paradise, save the last fatal morning. Michael was a man of piety, and of poetry too; indeed, I almost think that the purity and aspiring thoughts, yet humble contentment, of the first, imply the possession of the other. None can look from nature, up to nature's God, as he was wont to do, without having a living fountain in their hearts ever springing, upon which the Iris, the beauteous beams of light from heaven, will often delight to set; and in its enchanting minglings, sparkle into a starry poetry, which shines for them alone perhaps, but still is the true essence of poetry.

But Michael deemed little of these things—nothing; to have told him that the subtilties he treasured in his memory, and delighted to repeat in the secret places of the lofty mountains, or whilst tending the sheep on the open hills, as he pleased himself in lingering beside the calm waters, as evening shades were closing round him, and leaving him to guess at what the scene might be—to have told him that "the plaintive tenderness of Jeremiah," or the soarings and gladness, the deep-toned patience, and lofty glorying praises of the Psalms, were Poetry, would not, could not, have more endeared the Book of Promise unto him; for he knew it to be the word of God—he knew that to study it and practise it with humility and prayer, would tend to make holy—and he sought no wisdom or learning, save only to be "wise in heart." He was a very poor man, if, with a many-veined mine of contentment, any can be so called; he was a man of sorrows, too, if parting with those best loved, in the assured trust that they were gone to the regions of the blessed, to the land which is watered by no tears, can be called a source of grieving; and surely it may—for if the light in the eyes of those who love us is a gladness to us, who can look up with the same joyfulness when in the darkness or the shadows of bereavement? But he had one tie to this world—one loved link that bound him to life, and made him pray to be spared for her sake. And a little joy she was to him; and little did she know, when she was smiling with her sunny eyes up in the old man's face, and doing all she could to please him, that she was repaying him four-fold for days, months, years of anxious watching over her, for never did womankind tend more devotedly on her heart's best treasure, than did old Michael Raeburn on this one precious legacy of a darling child. Little Mary Glenthorne never knew a mother's tenderness, for her mother died ere she had

seen her babe; but she had never wanted it, for the old man had friends who loved and pitied him, and though he never would part with the little orphan, yet there was one kind soul near who was ever ready to watch by it and nurse it; and Michael's deep love soon taught him to take kindly care of it when he had it for hours out in the fields with him, the while he tended sheep. It was the pleasant talk of the country folk round about where they lived, how nice a mother old Michael made to the sweet child; and many thought it a happier day when they could go to their home in the evening and tell that they had seen the babe of the Violet Hut, as the old man's cot was called, because for years and years far back the first violets were to be found in the neat bit of ground that lay round his tenement.

But I am a long time in introducing you to this good old man, and I am leaving him all this time making his slow way, with feeble steps, in the still, fresh sweetness of opening morning. He was going to his day's work, that he would not give up, though he was barely strong enough to do any; but his employer knew him well, and made it an easy task to him; and so highly was he venerated and looked up to by all, that his younger and stronger fellow-labourers would gladly have worked double, to have saved the trembling knees of old Michael; and often has he been found stretched in comfort on the grass, and repeating whole chapters of the Blessed Book, as he ever called it, to those who were around him, or teaching hymns to the young children whose parents were at work. In the winter he was generally ill, and unable to leave his home; but he could then make nets for the trees, and a number of other little works; and when his cough was not too bad, he would have the young ones come to him of a morning, and teach them; and many a neighbour delighted to join in the evening prayer and reading at Old Michael's ingle. He had, for some years, given shelter to a poor widowed soul who had none else to care for her, and she took a grateful care of him when he was sick, and looked to little Mary; but old Martha was no companion to Michael, though a good quiet body; and though she and Mary were excellent friends, yet her dear grandfather was Mary's teacher, and what he told her of her mother's ways, went to the forming her feminine character and habits. Years had glided on, and Mary was seven years old at the time my story opens. Well, the old man walked forth to the music of his own holy thoughts, and the first chirpings of the awakening birds; he made his way, and by the sun soon found that he was something earlier than usual, so he determined to go a little out of his course, and rest him for a while on the WISHING-GATE. He was no rare visiter, but he never came but on some day that was especially marked in his heart's calendar, and this was the day when his own lovely Mary, the child almost of his old age, had been married. High had they all been in hope on that joyous day! But it had pleased the Lord first to take the youth—Oh! early was it in their wedded life!—and then poor Mary herself, or ever she had tasted the bliss of being a

mother. "Yea, high were we all in hope that day!" said the old man, and he sighed, and looked down in sadness; but it was only for a moment. "And are not they happy?" said he, with upraised and cheerful gaze; "and shall not I on this day too be high in hope? Yes, yes; Heaven be praised, I am! And for the dearest wish of my heart—what is it? I know the time when I used to have to weigh what ought to be the dearest—to reflect, ere I asked a boon of the Spirit, or the Angel of the Gate—to consider whether I was about to show myself a selfish, worldly man, or a sincere, a heaven-seeking Christian; yea, I can remember when on my lips I had it to wish for some creature-comfort for those dear unto me, and then would my better self, that part of me that seems *not* myself, put it into my spirit, that far better would it be to wish them and *all* of us the contented hearts that would make us grateful even for our *wants*; but *now* I have seen too long the mercies of my God—I have known the riches of poverty, the possessions of having nothing, the rejoicings of sorrow; I have read mercy clearly written on the darkest spots of my life; and *now*, at the end of many days, and after many wishes, I have but *one* to ask of the kind Spirit—and that is, that I may bring up my dear one in the nurture and admonition of the Lord, and that she may be holy in heart, in hope, and in life."

He rested awhile, and then, with staff in hand, went on his way; he had more than a mile to walk before he came in sight of the prettiest little cottage in the country, where he had a daily summer duty to perform in his way to the corn-fields where he laboured. He quietly opened the wicket in the lane where the cottage was, and walked in as one welcome and expected; he made his way up to a side of the house upon which grew, in beautiful luxuriance, a broad-leaved myrtle, which was in fine flower; he seemed about to pluck it where it was the thickest, as he placed his fingers carefully between the branches—but it was not to rob the stem of its blossoms, but to quietly unhook a loop of string from a nail, and by that act he opened the pretty rustic cottage window that was above; and the most silvery sounding little bell was just heard to strike as the casement of the window flew open; not a moment had passed ere a beautiful young head appeared at the window, and bending over, said, in the sweetest of woman's tones, and whisperingly, "Wait one instant, good Michael, and I will be down." Now, let every reader paint for himself the loveliest young creature that can spring up in their imagination—let them give her a *soul*, and a *heart*, and a *mind*, and a *manner*—a person, a voice, a countenance,—and add, unto it all that *nameless charm*, which is *emitted* by such a combination, and even *then* the being they pictured will fall short in loveliness of what was Medora Blessington! But how dare I speak for her, after all I have here said?—Well, I must be forgiven, for I know I shall not, I cannot do her justice;—and again I ask the gentle reader to supply the *charm*, the enchantment, which my subject deserves, but which my poor words, I feel, will never yield.

The old man had just seated himself on a bench near the myrtle, when, from a glass door of a small room, stepped the Aurora of the scene. She brought a glass of milk, and a slice of bread to the old man. "We are both very early this morning, Michael, and it will be near two hours before you get your breakfast, so just take this, for I am sure you are tired."—"A little feeble, dear, kind lady—but I would not say tired, on such a morning as this, though I have been out since four.—But how comes it I was not in time to wake you?—how comes it, my loved young mistress, that you have already asked the day's blessing for the old man, before he was here to tell you to wake up to see how gracious the Lord was to us—What another glorious day to our harvest!"—"I know not why it was, but it was nature's own doing. I did not ask the lark to come to my window," said she, playfully, looking at the ancient man; no, no; dear Old Michael is my lark, and as he first taught me to lift up my heart, it is he who shall have his wish of seeing me in these calm morning hours, in awakening me to thanksgiving for the blessing of the day-spring from on high that visiteth us. Yes, I can never forget that you have been a father, or a pastor to me, dear Michael;" and as she gently took the emptied glass from the old man, a tear fell on his hand from the most beautiful fount tears ever flowed from. It was just one dew-drop of the soul, fresh, pure, and grateful as those that lie among the choicest violets. The sunshine of those eyes was not for an instant clouded by it—but all, all the brighter and more exquisitely beaming. The old man looked at her awhile, as if he could only *look* and *love* her, and then said, with an earnest, pious tone, "May God ever bless thee!"

"I will go in and fetch my books, and then I will walk with you as far as the seat on the common, for I shall have time this morning for my favourite spot." She soon came back, with a large and shady straw bonnet, a little basket with three or four small volumes in it, pencil and paper, and a little sketch-book; and closing the door softly after her, for the whole house seemed hushed, they went out together at the same gate where Michael had made his entrance.

"What a morning it is, my lady! I can almost fancy I hear the birds utter the praises of God, so sweet and holy-sounding are their warblings in the still of such a dawning as this was."—"And why not Michael? I ever feel sure that they do. I even go so far as to believe, sometimes, when their notes call up good feelings in us, and win us to short prayers, and sending sudden thankings to heaven for all the gifts our Father sends us to enjoy in the calm of summer evenings, and all the various periods when nature shows most lovely; then do I feel almost that the gentle birds that speak to us, and teach, and comfort us, must be ministering angels. The thought will come across me, at least—Do you think there is folly in it, Michael?"

"Folly! Oh no—I think nothing folly, dear lady, that has aught of piety in it. But why ask a poor old man, ignorant and unlettered as I am? Thy heart is pure, young creature—and

may God keep it so!—and any thoughts like unto that need not be checked whilst it is a passing thought, for it would not be wholesome to indulge too much in what we have no warranty for in God's word; and those who *take hold* of a fancy of this kind, and love it too much—more than a thought of their own should be loved—have been known to become *visionaries*—to live in little worlds of their own, and neglecting those straight-forward paths of holiness that our Heavenly Father has already pointed out to us, have chosen instead little flowery footways, where there is only room for one to walk—where they tread alone, dear lady, doing no good to others, and ten to one, getting into a maze themselves. But it is thus with those who have not drunk freely of the waters of life—whose dawn, lady, of religion in their souls, has been like unto the false dawn, common, as I have heard or read, in Eastern countries, which appears an hour or two before the true dawn comes; but the true dawn does come—and so it will, by God's grace, to those poor bewildered ones who are feeling out a way for themselves, till He pleases to show them better, by His ministers, or by any other of his many means. But thy true dawn is already risen, and thy day is begun—and you are blessed with an understanding that will not let any twilight musings, or summer-evening thinkings touching this beautiful and wonderful world we are placed in, carry you too far; you will betake yourself, in soberness of mind, as well as piety of heart, to your home again, fulfilling its duties, and offering up, at your bed-side, a prayer of faith, of hope, and of love—and through the ONLY Mediator."

"I love to hear you talk, dear Michael; it reminds me of my very young days, when I thought it my best holiday to be let walk out with you among the mountains—when we used to be out for hours together—and when I used delightedly to run to dear Mary, on my return, to tell her what you had taught me, how many things you had told me, and where we had been. What happy days those were! and how much do I owe, and must I *ever* owe, to you and to her! But do rest on the bank, Michael, for you must be tired, and I'll sit on my favourite little nook beside you." Old Michael rested himself in the sun, and Medora took her little sketch-book, and was using her pencil. "They were happy days, and days that can be looked back upon without any bitterness in the sorrow that must shade every memory of the loved ones who have been taken from us—No, there is no bitterness, for I feel assured, dear lady, that Mary is happy; and if I can but be the means of leading her little Mary in the same paths, the dew of my evening of life will not be heavier than it is good they should be."

"What I can do to brighten them, you know I will do—gladly, oh! more than gladly! And you have promised, you know, Michael, to leave me two legacies—the little Bible you used to read to me in those long rambles of ours, whence I first learned *what* it was, and whose word—and your dear little Mary; and I must forget all that there is in the first,—aye, this beating heart must be made all silent and hard, before I can cease to do all in my

power for the good, here and hereafter, of the second gift. I think, I hope, and I will ever pray that I may do well for her; what you, good Michael, would approve, and thank me for."—"Oh! talk no more of it, dear one; I know it—I know it. May the old man's prayer bring some blessing upon you; for if there lives one who deserves to have all they wish, 'tis my own dear lady!"—"You think too well of me, Michael. I am not the very good girl you think I am—no, alas! my heart is a little rebel too, too often. You know it not, and often I know it not; but sometimes I find it out. Besides, I am not quite happy, Michael. Methinks, at times, that my poor mother, had she lived, all angel as you say she was, would not have been quite happy either. And yet so kind, so excellent, so benevolent as he is!—it is so strange, so very unaccountable, that the one thing needful should be wanting. Oh! it is so sad too—but I will not speak more of it. You know what I refer to; and so now tell me what you have been meditating, as you walked by the way, Michael?"—"Why, I think, lady, what most I dwelt on was the rich promises and comfortings in the 103d Psalm: and what language it is too! it is music to hear one's self say it, here in the stillness of the morning, as one can gaze from east to west, and adore the Maker of all, and only wish that the same fine thoughts and holy ones, might abide with one throughout the day, from the rising up of the sun to the going down of the same; but then I must tell you that, finding I was so early, and remembering *the day* that it was, I went to the Wishing-Gate."—"Indeed! did you, Michael? then will you be the happier; for the spirit or the angel that hovers there to listen to us is a good spirit, I am certain. I have a multitude of superstitions about that gate. They say, or you say, for it was from you I first learnt the legendary about it, that we may visit it, to put up a wish at least, three times only in the course of the year. Methinks I have a wish due; this very evening will I go, if my father does not need me to go with him elsewhere. I should like all the better to go the same day you go; besides, I too remember what day it is—"Well, I must leave you now, dear lady; they'll be looking for me at the squire's; and Mary will be there before me if I don't make good my way: she's to bring me my breakfast; and old Martha is told not to expect her home all day."—"Well, then, you will send her to me when she has done her breakfast and read to you, and I will keep her till you come to dinner: there is much for her to do in the garden; I can make her very useful."—"Thank you, kind one; so she is with you, I am happy about her. So fare ye well, and may a blessing be with you through the day!"

The old man, with slow steps, departed, and Medora, who seemed to have begun a new drawing, lifted up her head, and looked at him awhile, and then pencilled on quickly for some twenty minutes longer; then she put away the drawing, and took to some little books she had in her basket, a small Testament, an Italian Dictionary, and a volume of Wordsworth; she read a time in the first, and then she looked

into the last, and she pondered and seemed in doubt. At length she took a little sheet of note paper and the pencil, and the paper quickly received clear, distinct, and beautiful pencil writing on two of its pages; and then all were shut up and put in the basket, and left on the bench, save the volume of the poet, which she took in her hand, and walked away with, rambling about, and, ever and anon, turning to the page she held open. She had just reached the most retired and beautiful part of the lake, when she was met by one meditative stroller, who seemed to have sought the tranquil spot, to obtain calm to an anxious and agitated spirit. The footstep made him raise his eyes, and with a start, and a look of delighted surprise, he said, "Medora!" She blushed, and the blush was a "joy flush," as he held out her hand and said, "How little did I hope; how little did I expect to meet you. Your uncle is not worse, I trust?"—"No, no; at least I hope not, for I have not yet seen him. I am but just arrived; I have travelled all night. I am come to ask his advice, his consent; to TELL him, rather, that I am going to India."—"To India!" said Medora, with a look of unfeigned sorrow, and dismay, and surprise. She raised her head to look at him as he finished his hurried, and almost agitated recital; her bonnet hung back and showed her beautiful eyes and forehead, and clustering dark curls. At the word India, she let fall her book, and it seemed to remind her that she was expressing an interest too great; for as she stooped to pick up the volume, she blushed excessively, and almost muttered, "You know I have no reason to love India. I wish not those I know to be doomed to go there." A change seemed to have taken place in Frederick de Lacy in the short moment when all this was passing; a beam of happiness shot across his intelligent countenance, and his mouth, which was more expressive of sweetness of disposition, than any other mouth I ever beheld, looked its kindest, and smiled its gentlest, as he took the book from her hand, and, taking her hand, placed her arm within his, still holding the trembling little hand, and then said, "Now that I have once spoken this, let us calmly consider it, and let me teach you, my dear Medora, to look upon a residence in India as something better than a doom." They walked on a few paces; and though this was said with a steadier voice, both seemed under some restraint, for a short silence followed. Medora no longer looked at her companion, though she made no effort to release her hand. At length he said, by snatches, and as in much discomfort, "Ought I not to think it a fair opening in life to me, to one dependent as I am on an uncle, or rather solely and wholly relying on my own exertions, when nothing offers here? Ought I not to be grateful and more than grateful? Ought I not to be delighted with the prospect of going where so much is to be done—where youth, and health, and energy, and—God grant I may add devoted zeal in the cause!—are so much wanted; all which, as I hope, I could offer. It is not from my friend here, whom I have sometimes called in heart a female missionary, until she chid me for it,—it is not from such a friend that I expected discouragement in these my views; ties enough are there of early friendship—deep attachment—to draw me from my purpose, to incline me to stay my acceptance of this offered preferment; to make me refuse the *service of God*; in short, that I may cherish and delight myself still with these affections that must ever cling to my heart; but surely Medora is not one to keep me back when she thinks of the good, little though it may be, which her friend may be enabled to aid others in performing, for the benefit of those many millions of souls whose state of darkness she has so often marvelled at and mourned over? Tell me, tell me!—if I have not you for a strengthener of my weakness, one who will speak sweetly to me of its rich and high compensations for all of privation that the prospect compasses!" He pressed her hand, and sought her face, which was shaded and almost turned from him; at length she said, in accents almost inaudible,—"No, indeed; I can give you no comfort. How can I strive to reconcile you to a plan of which you speak with a tone of such deep sorrow? Oh! surely, surely, HERE you may do good; here there are souls to save—many, too many, it may be, of those to whom none other could speak as you would speak, whom none other is ordained to bring to the foot of the cross. But forgive my earnestness; sorrow to me must ever come with the name of India; it deprived me of the blessing of a mother, a sainted mother too, who would have made me what I never now can be; and for my father—did it render to him in early life what home and England would? Oh! no, no; I cannot say *go* to you; besides, CAN I say aught to banish an old, an early friend? Ask me not then to strengthen you, but rather ask me to plead on the other side, and then I will be eloquent, for, in truth, Medora Blessington cannot afford thus to part with those whose place in her regard no new friends can ever supply. Now may your uncle speak as I speak!"

At one part of this speaking she could scarcely refrain her tears; but at the latter part she made an effort to be more cheerful and assured.

"Thank you for all those words of kindness," said he mournfully; "and yet another pang, it may be the severest, is thus added to the cruelty of my fate—to give pain to you; and yet to hear from your own lips that my absence will give you pain, this has soothing in it: for what that indicates your feeling an interest can fail to soothe? But I am not fit to speak: my heart is too full; my happiness, my well doing, my destination for my whole life, depends on the next few hours. The will of God will assuredly be done; and what have I to do but to rest in faith on his directing me to what is best for me, and most for his glory, and then resigning myself to that sad conflict between the duties that lead to holiness and the deep affections that lead to happiness, which, alas! in this case must be mortified as well as sanctified? Here, then, I must leave you; but I will see you ere the day is done, and then may I have gained more courage and comfort to speak, of bidding adieu with a steadier voice and a less perturbed spirit. Have I your forgiveness for having thus

broken forth, and given utterance to the melancholy thoughts of my night journey, which has fevered, you perhaps think, my very brain?"—"Forgiveness! is it not the best proof of true friendliness and kindness to tell our sorrows? and think you that the 'little Medora,' whom you used to call your sister, could grow up to *forgive* your showing her confidence, and speaking of those things so near your heart, that prove you think her sympathy worth having? You know, you know that this morning's sad tidings can in no way call for my forgiveness, but much for my prayers, that—yes, yes, I must say it—that you may not go. Say no more to me, do not answer my foolish words, but just tell me, for my father is sure to ask, though I have not, how it is you are going? what post to fill?"—"That happily I can answer, as those who care most for me would wish I should. For a greater mitigation of my banishment I could not have. The new bishopric of *Madras* is given to my excellent friend, my almost father, Charles Townsend; and to be his confidential chaplain is the enviable, the happy place which is offered, in the most affectionate of terms, to the acceptance of the ungrateful being, who has passed hours of agony since it came within his reach! *what to so many would be the summit of their wishes.* You know all I feel for this man; judge, then, what I must feel for those who must be left behind!—but I must leave you." And, disturbed to a degree of anguish, he hurried from her, scarcely looking at her, as he tore himself away. Medora was greatly discomfited, and her brow told it. Millions of thoughts ran rapidly across the surface of poor Medora's brain, as she slowly bent her steps towards home; but one feeling pressed upon her heart, and to calm that, and to comfort it, and to gain strength and composure to meet her father's eye, and speak to him, as though that feeling was not, seemed her purpose as she sat for a while on the bench which had rested her, a little more than an hour before, in peacefulness and tranquillity. And now! but she had learnt where to seek submission; and that she might find it ready for her when she reached her home, and find it hand in hand with cheerfulness, was the short petition that she made in the few minutes that were left her. Some tears she shed, and then she looked up at the same lovely scene that had delighted her in the early morning; THAT was even more glad some; and why should she be less so? She gathered her little books and papers together; she looked at the page she had written, and this seemed to cheer her. She found that her volume of Wordsworth's was missing. Had it fallen into the lake? She could not remember; she knew it had fallen from her hand. Well, she would ask old Michael to look for it; and now home, for it was later, her little watch told her, than it ought to be.

"You are rather late this morning, my love," said Colonel Blessington, as his daughter came into the breakfast room; "you have tired

"I would this were prophetic, and that the time were speedily arriving when we shall have three bishops in India.

yourself, for you do not look so well as usual. Have you been up long?" said he, most affectionately meeting her, and kissing the lovely lips that met his with a smile of sweetness, as she thanked him, and told him she had been up very long, and had been walking farther than usual. "Then shall I find something to employ and please me much, no doubt, here, beside my breakfast plate—What! the Sketch-book, and a page of writing besides! That is indeed industry, or rather, that is like my loved girl, to give a double delight to her father, who so prizes all that his child does."

"Now do I fancy I shall see a sonnet of my friend Wordsworth's put into as sweet Italian as Petrarch himself would have sung; but stop—what have we here? dear me, what could induce you?—well, well, good—yes, very good—Though so strange a selection for rendering into Italian—Beautifully done, really." He read on between these words, and when he came to the end, said, "In truth, Medora, you have quite made poetry of it."—"MADE poetry of it! Oh, my dear father, it is poetry—all is poetry almost in that book—too beautiful, too sublime, for me to dare to translate it, and I never before attempted it; but old Michael was with me this morning, and was saying how much he loved that psalm—how much he delighted to dwell on its promises, and repeat it as he walked among the glories of Him who inspired it—and this it was which made me think I would try to write it."—"It is done as you do every thing, my child, and it has given me so much pleasure, that I almost think I shall ask you to try your hand upon more of these songs of the King of Israel."—"Gladly, most gladly, will I do my best, my dear father. Oh! you know not half the delight this little volume would give you as it is thus, in our native tongue," (and she placed her little hand fervently and affectionately on the very small Bible that had been in her basket;) "but if I can lead you to look into its treasures, by taking from it my morning translation, how I shall rejoice. Milton has tried to tell of its beauties; but do you not think, sir, that he is very feeble—worse than feeble, I should say—in *Paradise Regained*? When he gives language to be uttered by our Saviour, it seems as if the very presumption took from him the powers and the talents he possessed, and could exert to sublimity when dealing with men and angels? I never could like his speakings for our heavenly Father in the '*Paradise Lost*;' and in the other, I sometimes think the poverty of the language, the liberties he takes, the strange and most unpleasant words and phrases that he uses, amount almost to profanation."—"Come, come, Medora, I must cry, Hold—enough! I quarrel enough with 'the orb of song, the divine Milton,' myself, and have got into sad disgrace, you know, with our *own* poet, on that account; so I must not have you come and suggest fresh criticisms against him. I never got through the last poem, having, to say truth, been disgusted in the outset, so I know not the part to which you allude."—"I am quite sure you would not like it, and I am at a loss to think how he could speak so tamely of the holy volume, when weighing it with the works of unin-

spired men—the men of Greece—of whom Satan speaks so grandly.”—“Ah, my dear, ’tis a melancholy moral, or a severe satire upon poor human nature, that even such a man as Milton—(and we must, spite of what we love not in him, place him on that pinnacle where few can stand, of minds of might and souls that soar)—’tis, I say, a saddening and humbling reflection, that he depicts best and most forcibly those fallen spirits, whose influence over us is so enthralling, that they infect us with all their evil, by linking us so closely to them. Who, alas! can burst their bonds?”

—“Now, my dear father, if so you speak, I could say, Do read ‘the Paradise Regained:’ there you will see that the bonds may be burst. Oh, indeed, there is one, by whose aid, if we ask it, they will readily be broken.—But you will let me, you ask me, to show you more from whence I have this morning gathered. I will leave all, therefore, to time; and a day will come when you will read this with me—and that will be happiness indeed!”

—“Dearest Medora! child of my heart! what would I not do to give you happiness? and if it is in the power of any one to give it me, it is you, my love, it is you! But let no cloud disturb the sunshine of this most beautiful morning. Let us leave this subject—and now I turn to the drawings. Ah! this is sweetly done, my dear. What, your old friend Michael Raeburn!—and where is it you have placed him in such pensive mood? is it not ‘the Wishing-Gate?’ Yes, I see it is, and it could not be better—’tis the very thing to place beside the poem. I must show our friend how well you have illustrated his last little poem. I’m sure he will be pleased—but what made you think of such a sketch?”—“Old Michael and I were together for a long time this morning, and he told me that he had been visiting the Gate in his way here; and, as we were talking together, I sat on my bench by the hill-side, and just began this part of the Gate and the mountains, and, as he walked away from me, I took the liberty of taking him.”

—“And then, when your morning tasks were done, or rather, when the labour you delight in—when what gives gladness to your father was completed, you walked, and walked too far, for surely you are tired—the morning has been too warm for you. Well, I must tell you a bit of news—our worthy rector has got a living given him, such as there are few of—I would there were none—they say, of £2,000 a-year, on which he means to reside. Now this rejoices me, for it will be strange indeed if we get not a pleasanter neighbour than he has proved, and whoever he may appoint as a curate, can scarcely be so intolerable in desk or pulpit as he is. I wish to my heart our friend De Lacey were to have the curacy, though it is so poor that the wish is unfriendly, and the person he went to assist for a time may have found some permanent duty for him perhaps; but if ever I missed the society of a man—if ever I took real delight in social intercourse with a man so much my junior—it was in that youth. So much do I love him, that I am often on the brink of desiring the death of his poor old uncle, Sir Herbert, and that our friend Frederick might find himself

master of the priory! But Medora will frown at me for any wish that, to do good to one, harmeth another; she will have the last lines of Heart-leap well in her mind, so I must say no more in that strain—I only wish fervently that the youth would come to Font-vaie for a visit; and in that wish, you, my dear, will join me—will you not?” The father looked up at his daughter, in some surprise that the answer did not tread on the heels of the question, and he saw the blush with which she said, “Certainly, papa—and your wish is granted, for Mr. De Lacey is *there*, but only for a short, short time, I fear. I have seen him this morning, and he brings ill news—to my thinking, at least—for he is going to India as chaplain to the new bishop, who is his particular friend.”—“Now may India be without bishops for the rest of her days! may her widows go burn! and her pagodas be filled for ever! sooner than Frederick de Lacey should court an early grave by joining the infatuated party that imagine they can do good there equivalent to the loss of the men of worth and talent that have been sacrificed to such delusion!”—“Stop, stop, my dear father, you know not what you say! you know not the holy purposes, the high hopes, the truly Christian self devotion of those men, nor do you reflect on the blessing they have already proved among a people who were in darkness;—the seed is already in the ground—the harvest is *sure to come*—but must there not be labourers to gather it in? Remember, dear, dear father, how you yourself delighted in Bishop Heber’s book. Can I ever forget your marking the passage about Archdeacon Corrie,” and saying, ‘*None that man I envy*?’ Indeed you did! so what you are now saying is not your real feeling. ’Tis indeed painful to part with dear friends—the excellent, the amiable, the kind—but we ought not to murmur if they are parted from us, that they may serve God better elsewhere. I know that we ought not, though I feel that it is a heavy sorrow, and the murmur will arise.”—“I cannot believe that his uncle will let him go,” said Colonel Blessington, as he paced the room much disturbed, and ever and anon looking with deep interest and kindness at his lovely daughter. The breakfast was finished; and as both seemed musing, we will draw before them the curtain of conjecture as to what was passing in their bosoms, and take our reader out once more into “the world in the open air.”

When Frederick de Lacey parted from his loved companion, it was doing a violence to his nature. Had he followed the devices and desires of his own heart, he would not so have torn himself from her: more would he have said. But I am speaking of those who are actuated by higher and better motives than selfish ones; his heart might be bursting, but he

* Mission School in Benares.—“One of the most pleasing sights of all was the calm but intense pleasure visible in Archdeacon Corrie’s face, whose efforts and influence had first brought this establishment into activity, and who now, after an interval of several years, was witnessing its usefulness and prosperity.”—*Heber’s Journal*.

must endure that agony, sooner than relieve it at the risk of bringing future trouble on another. He was turning towards the entrance to Font-vale Priory, but he remembered that his invalid uncle would not be visible for hours; why not, therefore, ramble and loiter amid the beautiful scenery, which has ten thousand sympathies for one ever ready—which meets us soothingly, be we in sadness, or gladsomely, be we in joy? He took the path to the lake again, and thought, surely in its calm bosom I shall find peace to this troubled heart within me. It reflects the clouds that are passing, but not one leaves a shade of sadness, or disturbs the tranquil loveliness of its still waters. Heaven is ever to be seen there; and who can gaze upon the heaven above, and the heavens on the face of those fair waters, without being the better for such vision—without receiving a ray of that peace which the world cannot give?

He was about to open the volume he discovered he still had possession of, as he lay stretched on the rough ground beside the margin of the lake, when a soft footstep made him turn his head. He watched a little girl putting down a basket, which seemed to contain provisions; and then she went close to the water, and put a foot forward, and then drew back—and then she turned and looked round, and seeing one on the ground looking at her, she came to him, and said, "O! pray do, if you can reach them, get me some of those rushes, I want them so much; and if grandfather knew I got them he would chide me. I told him I never would. I'm so glad you are here, sir; pray get up and get them—you must be able." Now, if ever there was a lovely little cottage girl, the one who spoke was one—a little ardent creature, with such eyes that could be so gladsome, so beaming—the very spirit of a laughing summer day—and yet they could be so full of deep feeling and sadness, if aught was sad with those she loved. In this case, they varied in their expression most bewitchingly; for there was all the radiance of hope and joy at attaining, and yet the eager anxiety and doubt whether she should. And then she spoke her little entreaty in a sweet touching voice, that even a child-hater could not have resisted. "That I will, my dear little maid," said Frederick, rising. "But why don't you remember me, Mary? You see I know you. I don't know that I shall get rushes for little girls who forget their old friends." Mary now opened her eyes, and seemed puzzled. "Oh, I know you now! It was you who came and read to grandfather when he was ill; it was you read him the beautiful hymn, which our dear lady sent him afterwards to keep; and 'twas you gave old Martha the red cloak, and you gave me a little prayer-book. I do remember you. You are one of our best friends—and grandfather always prays for our best friends; and then I think of our dear lady and of you; and I think, too, of my pretty little red prayer-book. But grandfather says I should not think of that *then*—only I cannot always help it. Pray forgive me, sir, but when I wanted the rushes, I did not look at your face, only at your boots, which looked as if they would not mind the water."

She had got close to him during this long and most animated explanation, and was stretching her little neck to look up at him all the time. He took her up in his arms and gave her a kiss. "I shall certainly forgive you, Mary, for not finding out by my boots that I gave you a prayer-book for being a good child;—and so now for the rushes. Do you wish me to go into the very middle of them, and gather the finest? or will you be satisfied with some of those near the edge?"—"Oh, not into the middle! you would be drowned; and then so many would be sorry. Only just these, which your long arms will reach.—Oh, thank you! thank you! Why this will make a large one, or two little ones. I am so glad I've got them; and your shining boot is not wet at all! How much longer your arms must be than mine!"—"And what are you going to do with these rushes?"—"I can make pretty little baskets with them, while grandfather eats his breakfast, and I say my lessons to him; and you've got me such a many of them, I shall be able to make one for old Martha too."—"And who is the other for? Is it to be for me, Mary?"—"Oh, no, not for you, but for our dear lady; but, if you want one, I can make you one; only you have no where to put it, have you?"—"Why, where will your dear lady put hers, think you?"—"Oh, she'll put flowers in it, and place it on the stand in her own little room, where every thing is prettier than any where else in the world. She has got many lovely flowers on the green stand, and one is a myrtle, that she loves best of all, and takes such care to water it. It was only a bit gathered off when lady first had it. Wasn't it at you brought it her that evening from the Priory? Oh, it is such a beauty! I made a little rush basket to go over the pot, but no handles, you know." Thus did the lively little girl run on, looking all the time earnestly at him to whom she spoke; and then she suddenly said, "But I mustn't stay. Grandfather will want his breakfast; he's up in the corn-fields at the Squire's. Good bye, sir—thank you for these nice rushes." And off she went, first taking up her basket. Frederick stretched himself on the bank again, and bethought him of all that his little friend had let fall. "Oh, would that I had unloaded to her all my heart! And yet why do I say so? Would it not have been base selfishness till I know my doom?" This he muttered to himself, scarcely to be heard by the spirit of the waters. He then again opened the volume, and was attracted to the fly-leaf, where he espied, in the sweetest writing in the world, a manuscript poem, by the author of the rest. He caught at it eagerly, not wholly from a love for that writing, but from a delight in the bard whom he venerated. It was a short poem, called "The Wishing-Gate;"—and suppose we repeat it, as all may not have it engraven on their memories as I have.

THE WISHING-GATE.

In the vale of Grassmere, by the side of the highway leading to Ambleside, is a gate which, time out of mind, has been called the Wishing-Gate, from a belief that wishes formed or indulged there have a favourable issue.

Hope rules a land for ever green,
All powers that serve the bright-eyed Queen
Are confident and gay;
Clouds at her bidding disappear;
Points she to aught? the bliss draws near,
And fancy smooths the way.

Not such the land of Wishes—There
Dwell fruitless day-dreams, lawless prayer,
And thoughts with things at strife;
Yet, how forlorn should ye depart,
Ye superstitions of the heart,
How poor were human life!

When magic lore abjured its might,
Ye did not forfeit one dear right,
One tender claim sbate;
Witness this symbol of your sway,
Surviving near the public way,
The rustic Wishing-Gate.

Inquire not if the fairy race
Shed kindly influence on the place,
Ere northward they retired;
If here a warrior left a spell,
Panting for glory as he fell;
Or here a saint expired.

Enough that all around is fair,
Composed with Nature's finest care;
And in her fondest love;
Peace to embosom and content,
To overawe the turbulent,
The selfish to reprove.

Yes! even the stranger from afar,
Reclining on this moss-grown bar,
Unknowing and unknown,
The infection of the ground partakes,
Longing for his beloved—who makes
All happiness her own.

Then why should conscious spirits fear
The mystic stirrings that are here,
The ancient faith disclaim?
The local Genius ne'er befriends
Desires whose course in folly ends,
Whose just reward is shame.

Smile if thou wilt, but not in scorn,
If some, by ceaseless pains outworn,
Here crave an easier lot;
If some have thirsted to renew
A broken vow, or bind a true
With firmer, holier knot.

And not in vain, when thoughts are cast
Upon the irrevocable part,
Some penitent sincere
May for a worthier future sigh,
While trickles from his downcast eye
No unavailing tear.

The worldling, pining to be freed
From turmoil, who would turn or speed
The current of his fate,
Might stop before this favoured scene
At Nature's call, nor blush to lean
Upon the Wishing-Gate.

The sage, who feels how blind, how weak,
Is man, though loath such help to seek,
Yet, passing here, might pause,

And yearn for insight to allay
Misgiving, while the crimson day
In quietness withdraws;—

Or when the church-clock's knell profound,
To Time's first step across the bound
Of midnight, makes reply;
Time pressing on, with starry crest,
To filial sleep upon the breast
Of dread Eternity!

They pleased much our youthful and ardent reader, and gave a gentle turn to his thinkings —for he dwelt more upon the important question which his uncle was in a manner to decide. "I will wend my way to this gate," said he; "why should not I seek a friendly sympathy in the being who rules there? Why should not I ask of that good angel a boon, such as my heart is panting for?" He sauntered on, and there were his hopes, his life, his all of promised joy and blessing, again turned to the haven of his happiness—again with—But stop; suffice it, they were *not* in India; they were not with the zealous bringers of glad tidings to the children who wanted light; they were *not* with his friend the heavenly-minded, the truly apostolic Townsend; they were not even with his old infirm uncle, smoothing his thorny pillow, or striving to lead him to the only fountain of comfort and refreshment after a life of many gifts, and much forgetfulness of the Giver. No, no, one radiant image filled his heart, and to part with it seemed anguish. He came in sight of the gate; a stillness reigned around it—a solemn stillness;—it struck him, the pensive, almost warningly sweet note of one only bird told of the silence, and spoke to him whose footsteps interrupted it. "What note is that?" he inwardly asked himself. "I never heard it before; I feel there is meaning in it. I could fancy that it says to me that I am scarcely in fit mood to commune with the Spirit of the Gate; it seems to warn me not to wish rashly—to remember that a good angel listens, and will not grant the wish of one who thinks only of his happiness, and overlooks the high and holy purposes for which he was called into being, and for which he was endowed with noble faculties, and various talents. Stop, and reflect! Calm the ardour that is glowing in thine heart, and frame a wish that will be worthy of you—one that is untainted by selfishness, and that will not bring upon you the ranklings of remorse!"

I tell not whether the bird's note of touching sadness whispered all this to him; or whether the spirit, hovering o'er the gate of tears, of sighs, of penitence, of prayer, aye, and of smiles and joyfulness too, or whether the light within him, lit up this pure flame, by which he saw into himself, I say not; but, after resting on the moss-grown bars, and meditating such a volume of pure thoughts and heavenly breathings as even spirits delight to read, there came from him a wish, not such as was beaming in his eye when first he approached it, but one that proved him a true Christian, a disciple who desired, fervently desired, to be a faithful follower, a useful minister, of his beloved Master. "May, then, my lot be cast where I can do most for His glory—bring most to his Cross;

—and may strength be given me to bear meekly the sorrowful partings and privations that the fulfilment of this wish may involve."

And was he not his best self when he turned from the gate? had he not fought the good fight?—for it is no light thing to put up a wish, or a prayer rather, on this spot. A few paces from the gate he again met the little Mary. "Well, my little friend, what, again are we to meet? And what do you want me to do now? for you look wistfully upon the bank beyond the ditch?—And the basket is made! and very pretty it is; I must certainly have one some day."

"I daresay the kind lady would give you this if she knew you liked it; but you must not ask for it, because grandfather says that it is not right. But to-morrow, if you'd get me more rushes, sir, I would make you one, and fill it with roses off my own bush; but will you, if you please, reach me some of those corn flowers, they would look so pretty with all these sweet grasses I have been gathering? and lady always likes the corn poppies and those blue flowers—Will you?"

"Yes, that I will, Mary; only you must hold my hat, or I may drop it into the ditch as I scramble under that old thorn."

"Oh, that is a nosegay of them! I shall have enough for dear old Martha's basket too—How very good you are to me, sir! You do look so like the picture when your hat's off, sir, I wish you would not wear it."

"Not wear my hat this hot day, Mary? what can you mean? And what picture have you ever seen that is like me? and where?"

"Oh, it is quite like your face, though not your clothes; haven't you seen it? There's an old man, and he's just like grandfather; and then there's one young, and he's leading him, and that's like you; but lady calls it Belles, or something like that. She did it; and I love to look at grandfather, and she looks at it too, when she is singing and playing sweet music, for it hangs just before her. Wouldn't you like to see it? I'll ask her, sir, if you may, and I think she will let you, when I tell her how kind you've been, and that you've got me all these and the rushes."

"I will ask her, my little Mary; you had better not trouble her with such things; when you are with her, you should be doing all she tells you, and not thinking too much of all the pretty things you see in the room.—But here we are near 'the Wishing-Gate,' Mary. Do you ever wish there? and have you nothing to wish to-day? I think you must. I am going on to Sir Herbert's, but suppose you stop and make a wish—and let it be a good wish,—one that you can think of after you have said your prayers at night, and feel the happier for; mind that, Mary.—And now good bye; I will not go away again without bidding good bye to you, and your grandfather."

Mary was left alone; she stood still before the Gate—(I wish I could draw her); she looked at it; she looked at her bunch of grass and flowers; she saw one little bird hopping near her: "I wished for the lady to give me some chickens, but I don't think that's a good wish. I wish old Martha was always dear old Martha, and never spoke angry to me; but that's

not quite the goodest wish. Oh, I know what must be a good wish! I wish I may always be a good child, and do all grandfather and lady tell me, and never make him look sad at me. This shall be my wish, and I won't mind the chickens; and I'll be kind to old Martha when she does speak sharp, for I know she loves me and grandfather. I'll kiss the Gate! and leave the prettiest pop-py, and the prettiest blue flower (thus she sung it out as she selected them), and some of the grass; I'll tie them to the bar in a nosegay, and tell the Gate, for that and the kiss it must let my wish come true." And this she did, after a pretty fashion, and I took care those flowers should not wither for that day; she then hastened to the cottage in the lane, and opened the gate where old Michael had entered so many hours before.

Medora had passed two hours of musing—melancholy musing, we fear—since we left her with her father, who soon left her for his own study, where he passed most of his mornings. She could not read as usual—she found her thoughts wandering far, far away from the subject. One only thought was with her; it was a troubled stream, and yet it had much of loveliness; fair and enchanting were its scenes and prospects in some of the windings that it took—endearing spots of peacefulness and joy would the sunshine of her heart sometimes show her, as she traced that deep-flowing current; and then again all would be overclouded, and she felt the rain-drops of those clouds of her bosom's happiness come dropping on her hands as she sat working, mechanically, for she knew not what she did. She was aroused by this gentle shower of feeling—she felt it was wrong to continue such an indulgence—she had duties to attend to, and, *Desdemona* like, she must draw herself off from the story that was calling forth her sighs, and all her dearest sympathies, and attend to the comforts of others. She did arouse herself, and bestir herself, and then she went to her own little sitting-room, which young Mary had lauded so highly, and there she felt that her best occupation would be drawing; she arranged it all, and then she looked out at the window at the silver bell, almost hidden by the jessamine that twined itself around and within the little casement,—she saw little Mary close the gate, and she called her to come up to her. "Why, Mary, what a pretty basket! Oh, and what beautiful grasses and corn poppies! But how did you get the rushes, Mary? I hope you did not get them yourself?"

"No, indeed, lady; the gentleman got them for me, and he did not go in the water for them; and will you please to have the basket and flowers, lady?"

"That I will, Mary, and thank you too, my dear child. I like them very much; but what gentleman was it, who reached the rushes for you?"

"Oh! you know him, lady; 'twas the gentleman what is so like that man that grandfather's leaning on in the picture?"

"Indeed, Mary! It was very kind of him;" and Medora blushed deeply, as the little girl pointed to the picture. "And where did you find these corn flowers?"

"Oh, they were growing so beautiful on that

high bank, lady, very near 'the Wishing-Gate.' I could never have reached them!"

"Then how did you get them, my dear?"

"He was there, too, when I got them, and saw me longing for them, and then he scrambled, and took his hat off,—and then I knew he was like the picture!"

"And then what did you do? make the basket?"

"Oh, no, that I'd made, lady, when I was with father up in the hill-fields; then I went to the Gate, 'cause the gentleman told me to go and wish. I think he'd been wishing, for he looked very solemn, and something sad, when I first saw it was him; and he told me to make a good wish, that I should not be sorry for at prayer time; so I tried, but grandfather says we ought not to tell those wishes, only to the Gate."

"No, don't tell me, Mary; I hope it was a good wish, and if you thought first of what your friends said to you, I dare say it was a good wish, so I will wish it may come to pass. And now, Mary, as 'tis very late, you must sit down at once to your work, and see if you cannot finish making your grandfather's stockings, and hemming Martha's handkerchief, because I wish you to give them to them this evening when you go home."

Mary soon established herself on her little stool by the window. Her dear lady did not talk to her so much as she often did, or ask her questions on what she had learnt, for she was busy with many thinkings. "How strange that three so dear to me should have been to the Gate already this morning! Methinks I would like to read their wishes, said she inwardly. "Now, Mary, dear, let me look how you get on with the R. There's a wrong stitch here. Mary, Mary, why don't you look at it?"

"Oh, he is so very pretty, I must look at him! Please, lady, do let me. And I think I know who it is—I think?"

The ecstasy into which the little cottager was thrown, was by having turned her eye to the drawing her kind mistress had nearly finished. Medora looked pleased at the child's raptures. "And who do you think it is, Mary?"

"Why, I think it is little Samuel; is it not, lady?"

"It certainly is, Mary; but how came you to think so?"

"Because it looks just like what I used to see inside my head, or somewhere, where no one else could see it, when grandfather first used to tell me the story when I was a very little girl; and I never hear of him but I think of him as I saw him then—and that's quite like."

"It is meant for Samuel, Mary; and now, my love, work steadily and finish this, as there are many dead roses that want cutting off."

The work was soon done, and then they went into the garden, and Mary was set to cut the roses. Medora passed into her father's study, but he was not there; so she went again to her own room, and then went on with little Samuel, till Mary came up and showed how many beautiful roses had lived and had died. When this was done, Mary was allowed to go and feed the chickens; her kind lady came to

her, to enjoy her little ecstasies with her feathered favourites. "Now, Mary, you've been a good child for many weeks, and as I hope you will do your best always, I will give you three chickens, and your grandfather will tell you how to manage them."

"Three chickens, lady!" and poor Mary seemed almost dumb-founded with delight. "Oh how very kind of you—how can I be ever good enough at my lessons and work!—and that was one of the things that I wanted to wish for, but did not dare. Oh you dear little creatures! how I shall love you!"

"Yes; but, Mary, you must take care and not kill them with kindness!"

"Why, that could not be, lady, could it? I should not have been alive now, should I, if people were killed so?"

Mary was torn from the chickens, and sent to do more work in the garden; and we must now just see what Medora's father was about.

"Ah! thus it ever is with me!" said Colonel Blessington, as he sauntered forth; "thus it ever was, and thus it ever will be; those that my heart leans to, those in whom I take delight, are soon separated from me for ever; this young man, whom I so trusted might be settled near to us—become to me even more than a friend—but why is not my heart hardened to meet my destiny? Why, even as age draws on, am I still to feel these things, even as in youth I felt them?—But not for myself, my loved Medora! surely that brow, which is truth and openness, and all sincerity, was shaded by sorrow this morning! and yet those words she spoke to me! The consolation she drew from his going, if go he must—I would her consolations were mine! and how deeply she seems to wish it; surely she is an angel!"

By this time he found himself beside my temple—this my "Wishing Gate." He thought of the drawing that had pleased him so much; he went and rested his arms on the gate; he looked, and smiled at the pretty nosegay tied to the bar; he was lost in a deep and painful memory of days gone by, that never could be recalled; he looked through the postern of time long elapsed, with a melancholy not unmingled with remorse and sincere penitence. He thought, "What might not I have been, if Frederick de Lacey had been my equal in age and my companion in India; and what might I not now be, might I, by God's blessing, in some sort redeem the time that I have lost; oh, more than lost; were I to be led by one like unto him? Oh, could I part with all that pride, that keeps me from being taught in these high things by those who are not among the most gifted in intellect, or my own equals in other things! but could I have a pastor here whom I loved, this heart which has ever ruled me, would turn unto him and ask his aid to lead me to those waters of comfort which I find, but too late, can alone refresh and soothe us in this life of pain and sorrow; and then do I not see that the daughter of my own loved treasure; my sun of happiness that brightened on me for so short a day; do I not see that she desires I should tread, as she does, the heavenward path? Oh! that this might be! What blessings hast thou given me, great God! But where has been my gratitude? scarcely on my

lips in thanksgiving and prayer, and never shown forth in my life, and therefore hast thou only given me to taste of them. A little while thou didst wait for my acknowledging them, yea, more than a little while; but then thou, in thy mercy, no doubt, withdrew them, that then I might humble myself before thee. One blessing remains to me. Grant that from this hour I may indeed be grateful for it; and may I become a blessing unto my angel child, even as thou wouldst have me to be. Grant, too, that she may not need all the consolation a father's love can yield to a bereaved and forsaken heart. It would seem I, too, had been breathing my wishes at the gate of mystery and tradition, and why should I not?" He turned from the spot with a more cheerful temper than he had reached it, and he then went on towards the Priory, in the hope of finding his young friend, and hearing the result of his interview with Sir Herbert. We will leave him; the solitary walk in the beautiful woods that led to that fine old residence will cherish and nurture all those high and holy aspirations, all those humble feelings and pious hopes, that have been with him at our Gate.

"Come, Mary," said Medora, "it is four o'clock, and I am quite ready; we shall but just be in time for old Martha before she makes her tea, and I wish her to have a nice cup of tea this afternoon, so I've got a little canister here, and some sugar, and this nice little milk-loaf; so come, put them in your basket and let us go."

"But the chickens, lady?"

"Oh, I will send them by Nanny this evening, and you must be very *patient*, as you will not see them till you get up to-morrow, I dare say."

"That I will, lady; for how many things I've got!—the handkerchief and the stockings, and the rushes and flowers of Martha's basket—Oh! so many."

They walked to Violet Hut; and Medora spoke kindly to old Martha, and pleased her with the presents; and then she went to see old sick Donald, and read to him; and then, after bidding Mary good bye, and telling her when to come the next day, she went towards home alone.

"I will go now to the Wishing-Gate," thought she; "and then, if my father walks in the evening, I shall not be vexed, and wishing to go elsewhere; so she turned that way, and felt thankful that she was so much more cheerful than in the morning. Oh! if indeed all the joys of one's own heart were lost to us for ever in this world, yet still what contentment, and almost gladness, might one not derive from doing kindnesses to others!" This she strove to make herself believe; but it was only a striving, for she soon felt the sadness coming over all her heart, at the thought of parting with one in whom, thus in life's early morning, (when the soul requires so much, and pictures so highly, the one only friend that it desires to rest on, for time and for eternity,) she had found ALL—yes, quite and more than all. "What then is thy wish?" seemed to be said solemnly to her as she came in sight of the Gate. What could it be, but for the con-

fimation of her heart's happiness? If she could but know that she was loved, this would be consolation; and yet, surely, she could not quite mistake a manner that thrilled her with its tenderness and kindness. But stop; she had not touched the Gate. Again, a voice from within her, or around her, seemed to say "Medora is not selfish—another desire lies buried in the recesses of her heart—a wish of ten thousand prayers—a wish that is with her at sunrise and sunset, and parts not from her through all the day."—Yes, yes; oh did I for one instant let another take its place? Oh! how closely twined must he be with my whole being, that I should have felt the agony of thinking of this parting put from me the wish that ought to be first—that is first—that ever shall be first! Could I ever be happy, if all my selfishness were listened to—and I became the loved companion of —? How could I be happy if I thought that my dear father was not treading a path that would lead him to everlasting blessedness? Grant, then, my wish, thou pure spirit of this place! Grant that he may be led to cling to that Cross, and to trust in that Saviour, who alone can save us!"

Many tears did she shed ere she turned towards home. She noticed the pretty bunch of flowers, and knew it to be the fancy of her dear little Mary. She then prepared herself for dinner, and met her father with smiles. He was particularly lively, indeed quite gladsome and happy. His daughter asked him how he had spent his morning, as she had missed him from his study since one o'clock.

"I have had a chequered day of it, my dear love," said he; "but the brightest colours came at last to delight me, after the sombre hues that had something shaded the first part of my morning. I really don't know when I have felt so much joyousness as I now feel; and you, my beloved Medora, seem all the better for your rest after your fatiguing early walk; you must not let that old beau of yours—that venerable old Michael—beguile you into such rambles."

"Oh, you must not blame him, dear father, for he only beguiled me to the bench on the common; but I have not been resting, for I went home with Mary, and then I came home by the Wishing-Gate."

"What! have you been to speak with the gentle spirit of the Gate? Then are thy good looks accounted for; she can spread a ray of sweet serenity over the features as well as the hearts of her votaries. It may be she has wrought in me the change I have undergone since the morning—it may be I owe to her mysterious enchantment the peaceful calm I feel within me—for I too, dear Medora, found myself, some few hours since, in deep reflection at her shrine; there were lamentations for the past; there were wishes, yea, even hopes, for the future, all mingling in my busy thoughts; and I know not but that even I asked her to shed, upon what of good feeling was aroused at those moments, a few drops of that dew from Heaven, so pure and peace-giving, that would nurture into good fruit those desires after a better and a holier life."

"My dear, dear father!" said Medora; but

she could say no more,—her heart was full, and the thought of what her own wish had been, and the prospect of its fulfilment, was too, too much for words; the tears would fall, and her kind father kept silence, and in no way disturbed her. She soon recovered her composure, and accepted, with the loveliest of smiles through her glistening eyes, the fruit her father offered her, and then she said, "Have you not been to the Priory, sir?—have you seen nothing of Mr. de Lacey?"

"Yes, my dear, I have; oh, yes! I was some time with Sir Herbert, and after that walked down to the vicarage with our young friend, who wished to call there before he again left us. But talking of the *Wishing-Gate*—Medora, who was it adorned it with that nosegay of wild flowers? Was it you, or was it your little protégée, Mary, who has more native rustic taste than is to be found in many of the pastoral poems that attempt to describe it? Your little jewel of a sketch gives not the adornment, so how came it to be there?"

"Oh, you are quite right in thinking it was Mary's taste—it is just like her; and though she did not tell me, I feel sure no other little lass in the village, or miles round, would have thought of such a thing. This is a treasure of a child, so very affectionate, and really so good. I wish, my dear father, you could have seen her young raptures when I gave her three chickens! I must, some day, take her with us to Rydal. I am quite sure our friend would make a volume of poetry out of her; for she has none of that shyness that would make her silent and dull among strangers. She is at that happy age, that with such an ardent mind as hers thinks not of restraining her delighted feelings, or curbing her restless curiosity. Don't you think he would like her?"

"Assuredly he would, my dear; the very sight of the child would call forth a sonnet at least,—for no sunbeam on the lake ever looked more the picture of bright happiness than does little Mary Glenthorn, as she passes over on the hill side, with her looks of love, and her laughing gladness. I often think, when looking at her, that instead of saying to her, '*Who made you?*' as the catechists do, one should speak poetry, and say, '*Who filled thy countenance with rosy light?*' You shall take her, my dearest, and that before many days are gone by; but where is the volume in which you wrote out '*The Wishing-Gate*.' I was looking for it this morning and could not find it on the Wordsworth shelf."

"I'm sorry to say, my dear father," said Medora, blushing deeply, "that I was careless enough to leave it somewhere in my walk; but it cannot be lost."

"Why, I don't know, my love. I think it's a chance if you find it, and I own I should be grieved to lose the copy Wordsworth himself gave you. I never knew you so careless before; cannot you remember at all where you last had it? Do think!"

There was a strange look—a sly or saucy curl at the corner of his lip, as with an affected seriousness her father said this, which puzzled, whilst it pleased Medora. "I certainly do remember where I last had it, or knew that I had it," said she; "but there is my writing

in it—my own name too. Oh, I am sure, no one who found it would keep it,—they would see whose it was, and bring it."

"I don't know that," said her father, with the same expression;—"your writing in it may be the very reason for their choosing to keep it. But I would advise you to go this very evening to the spot where you remember holding it, and perhaps the Kelpie of the Lake may tell you if she has taken it, and placed it in her library of liquid poetry; or, perhaps, she may tell you, if you dropped it on the land, whether it was caught up by an adoring swain who chanced to be passing at the time."

Medora was quite at a loss to understand her father, and yet she felt a consciousness that made her cheeks tingle, and she knew she must be looking very confused.

"I will go at once, my dear father, and retrace my steps of the morning, and I doubt not, in a short time, I shall return with the volume untouched and uninjured; and it will be all the dearer to us from our having feared losing it; and besides, perhaps it will have gained a few more pages of poetry from having passed this lovely day among the mountain daisies, or near the grateful broad leaves of the water lily, that teaches us all, as Coleridge tells us, how to delight and rejoice in Heaven's gifts the more and the more, as the more abundantly they are showered upon us."

"Yes, that is a pretty idea, though you have *mored* it, my dear. You speak not with your usual correctness and elegance—But you are vexed about the volume, so go, and endeavour to recover it; but stop, Medora—In case our poor young friend should call in the evening, do not be absent,—return soon, that we may both bid him adieu ere he leaves us. Deny him not the consolation of seeing that he parts with friends much attached to him, and deeply interested in his future life—So now, my love, hasten away."

And here he left her, perplexed and saddened,—she knew not what to think. What could her father have heard to please him? What meant his strange manner? She was all in doubt, and a mystery seemed to cling to her; but his last words—they could have but one meaning. In sadness, then,—yea, in deep, deep sadness and melancholy, did she pass along. It was a lovely evening, just such an eve as does end, as should end, so brilliantly beautiful a day—a still—a calm—a pensive evening—such as can be felt, but never described,—an evening when all that is dearest in our existence is thought of, and mingles with the delicious repose of the scene; but 'tis folly to attempt to paint it,—for those who have never experienced the enchantment of such hours, would not understand the separate existence they seem to give one; and those who have, can imagine what this special evening was. It was late, later than Medora had thought when she left home; the shades of evening, that seem peopled with tranquilizing and heavenly spirits, were fast approaching, and the moon was gently rising; she gained the very spot where she had been in the morning, and sat her down on the rough ground I mentioned, near the rushes. Her heart, if not in union with the scene that lay before her,

was so filled as to find an exquisite relief and soothing in contemplating it. Her eyes were on those peaceful waters, and it was just that light, or twilight, when she was wont to delight in seeking in their depths that undefined mysterious scenery, which gives such a charm to evening communings with the riches of the deep, and which, I suppose, must be a species of that disease of the heart called, I think, the Calenture. But now, though her eyes were there, their expression was not derived from aught without her. Imagination was then at rest. No, they were filled with tears—the purest fountain within her heart of hearts was disturbed and overflowing, and in those waters of life and of happiness she feared she saw the sunset of her hopes, and of all her bliss, on earth. So much was she lost in these sad-denying reflections, that she heard her own name pronounced by the voice that was dearest to her, ere she was aware that any human being was near. It was Frederick de Lacey, who gently seated himself by her side, and with one gaze of kindness, and that one word spoken took her hand within his. A few minutes passed ere either spoke, and then Medora said, "What can there be here on earth more like unto heaven than this scene!" The words were scarcely uttered, but yet the effort was made, and she gained composure to say, "I believe I came here to look for a book which I dropt in the morning, and which my father is desirous I should find." She seemed much distressed, and withdrew her hand, intending to rise.

"Stay! stay! I have the book; go not away I entreat you; I have to question you, to petition you, dear Medora; there is a sweet little drawing between the leaves of the book, some lines at the back of it, which, though they belie what you spoke in the morning, yet are so full of beauty, and so touching, that if, as an old friend, I might keep the drawing, I can only say, there is nothing I at present possess which I should prize so dearly."

"What is it? oh! what can I have so carelessly left about?" She appeared almost alarmed, till he showed her the sketch.

"Oh, it is this! I'm sure if you think it pretty, or at all like it, I can have no reluctance to giving it, save its being so very unworthy your acceptance, and my regret that it is not much, much better."

He looked his thanks so meaningly, that Medora talked on as though timidly dreading their expression in words. "You see that it is the tomb of Mr. Cleveland, mentioned in a way to make all hearts love him, in Bishop Heber's Journal; and I have placed in its neighbourhood one of the Sagoe Palms, which the Bishop tells us grow in this beautiful form, and must therefore appear as temples in the wilderness; and who shall say that in those far-away countries, where the blessings of Religion are so little known, the exquisite formation of this tree, with all its rich gothic arches, may not arouse some of our own people to remembrance of those places of worship that adorn their own land, and lead them, by a train of newly-awakened holy feeling, to pour forth those praises and prayers which have too long been unbreathed?" This was said hurriedly

as a thought long since born, and as in explanation of the picture; the devoted look of deep delight of him who listened, again met her, and she went on to say, "I could not have put the tomb in better scenery, I thought,—it must be a beautiful tree; little, oh how little, did I think or fear when I drew this, that my kind and early friend would perhaps see it growing in its native soil! and now, alas! ere this harvest moon again visit us, you will perhaps have rested under its shade." She could say no more, she was altogether overpowered by the effort she had made to speak at all; but she had not an instant to feel this, ere he clasped her towards him, and said, "No, no, Medora, not such is my fate! in you alone does it rest; this moon that now is, that is just ready to peep above yon mountain, before she has gladdened the bosom of the lake by her gentle beams, has, my own, my loved Medora! the power to make me the happiest, the most blessed of beings. Tell me, oh tell me, that I am loved!" As the moon sheds her first spangle on the rippling of the lake, Medora sent, by one look, the deepest, the most lasting ray of happiness into the soul of him who all but adored her.

It scarcely needs to tell, that no evening had been so blissful to the happy party at the Cottage in the Lane as this. The Vicar had given up the living to the patron Sir Herbert, who, in answer to his nephew's proposal of going to India, offered it to him. It was of course accepted, and the first reflection of those moonbeams on the calm bosom of the lake, shone upon two of the happiest hearts, and showed them to each other in all their fulness of affection and fervent love.

The father, too—to him it was the opening of a new life—a life of hope and holiness—and thus were the loved votaries of THE GATE listened to in their tenderest wishes, thus were they all rewarded, for not following too much the devices and desires of their own hearts, when their duty and devotion to the Maker and Giver of those hearts bade their wishes tend *Heavenwards*.

From Blackwood's Magazine.

THE FIRST GREY HAIR.

THE matron at her mirror, with her hand upon her brow,
Sits gazing on her lovely face—aye, lovely even now:

Why doth she lean upon her hand with such a look of care?

Why steals that tear across her cheek?—She sees her first grey hair.

Time from her form hath ta'en away but little of its grace;

His touch of thought hath dignified the beauty of her face;

Yet she might mingle in the dance where maidens gaily trip,

So bright is still her hazel eye, so beautiful her lip.

The faded form is often mark'd by sorrow
more than years:

The wrinkle on the cheek may be the course
of secret tears:

The mournful lip may murmur of a love it
ne'er confest,
And the dimness of the eye betray a heart that
cannot rest.

But *she* hath been a happy wife;—the lover of
her youth

May proudly claim the smile that pays the trial
of his truth;

A sense of slight—of loneliness—hath never
banish'd sleep;

Her life hath been a cloudless one,—then,
wherefore doth she weep?

She look'd upon her raven locks;—what
thoughts did they recall!

Oh! not of nights when they were deck'd for
banquet or for ball,

They brought back thoughts of early youth,
e'er she had learnt to check,

With artificial wreaths, the curls that sported
o'er her neck.

She seem'd to feel her mother's hand pass
lightly through her hair,

And draw it from her brow, to leave a kiss of
kindness there;

She seem'd to view her father's smile, and feel
the playful touch

That sometimes feign'd to steal away the curls
she priz'd so much.

And *now* she sees her first grey hair! oh,
deem it not a crime

For her to weep—when she beholds the first
foot-mark of Time!

She knows that, one by one, those mute me-
mentos will increase,

And steal youth, beauty, strength away, till
life itself shall cease.

'Tis *not* the tear of vanity for beauty on the
wane,

Yet though the blossoms may *not* sigh to bud,
and bloom again,

It cannot but remember with a feeling of re-
gret,

The spring forever gone—the summer sun so
nearly set.

Ah, Lady! heed the monitor! thy mirror tells
thee truth,

Assume the matron's folded veil, resign the
wreath of youth,

Go! bind it on thy daughter's brow, in *her*
thou't still look fair;

'Twere well would all learn wisdom who be-
hold the *first grey hair*!

T. HAYNES BAYLY.

From the *Annual Biography and Obituary*.

SIR HUMPHRY DAVY, BART., LL. D.
F. R. S. M. R. I. A., &c. &c.

Of the various branches of human know-
ledge which have been elucidated by the dis-
coveries and improvements of modern times,
no one has been further advanced than that of

chemistry. The rapid and important acqui-
sitions in that science which have distinguished
the present age, are chiefly to be attributed to
the substitution of the analytical for the syn-
thetical system of philosophising; and, in the
next place, to the profound judgment and in-
defatigable ardour with which the subject of
this memoir availed himself of that great im-
provement, in unveiling in a career, unequalled
since the death of Newton, the mysterious
constitution of the infinitely diversified matter
by which we are surrounded.

The circumstances that may have produced
in any eminent man a propensity for a particu-
lar pursuit, will always be inquired into with
curiosity and interest. No one can deny the
powerful and commanding influence of our first
impressions; and the acute observer of char-
acter will continually develop traits that are
referable only to such a source; even as, in
the magical colouring of Rembrandt's pictures,
the practised eye readily recognises the *chiar'-
oscuro* of his father's mill, in which the artist
passed his earliest days. But circumstances,
however happily combined, although they may
direct, can never create, genius; it is true
that Cowley, as he himself relates, became a
poet by reading Spenser's *Fairie Queen*, which
he accidentally discovered in the window of
his mother's apartment; and it is equally true,
that Sir Joshua Reynolds had the first fond-
ness of his art excited by the perusal of Rich-
ardson's treatise: it is possible that, without
such accidents, the one might never have
courted the Muses, nor the other won the fa-
vour of the Graces; but still Cowley and Rey-
nolds never could have shone dimly under any
circumstances; for true genius, as it has been
well observed, is a mind of general powers,
accidentally determined in some particular di-
rection. So was it with Davy; his mind was
as vigorous as it was original, and no less logi-
cal and precise than it was daring and com-
prehensive; nothing was too mighty for its
grasp, nor too minute for its observation: like
the trunk of the elephant, it could tear up the
oak of the forest, or pluck the acorn from its
branch. That circumstances in early life
should have directed such energies to the ad-
vancement of a science which requires for its
successful cultivation all the aids of novel and
bold, and yet patient and accurate, research,
is one of those fortunate coincidences to which
the world is indebted for almost all the valu-
able knowledge in its possession.

The name of Davy is of ancient respectabil-
ity in the west of England. Sir Humphry's
paternal grandfather had considerable landed
property in the parish of Ludgvan, in Corn-
wall; and his father, Robert Davy, possessed
a paternal estate opposite St. Michael's Mount,
called Bartel, which, although small, was
amply competent for the supply of his limited
desires. It is probable, therefore, that his pro-
fession, which was that of a carver in wood,
was pursued by him as an object rather of
amusement than of necessity, although in the
town and neighbourhood of Penzance there
remain many specimens of his art; and among
others several chimney-pieces, curiously em-
bellished by his chisel. Unfortunately, he did
not live long enough to witness his son's emi-

nence; but from his widow,* who has only lately descended to the tomb, full of years and respectability, this boon was not withheld: she witnessed his whole career of usefulness and honour, and happily closed her eyes before her maternal fears could have been awakened by those signs of premature decay, which long since excited in his friends, and in the friends of science, an alarm which the recent deplorable event has fatally justified.

Sir Humphry Davy was born at Penzance, in Cornwall, on the 17th of December, 1778. Having received the rudiments of a classical education under Dr. Cardew of Truro, he was placed with a respectable professional gentleman of the name of Tonkin, at Penzance, in order that he might acquire a knowledge of the profession of a surgeon and apothecary. His master, however, soon became dissatisfied with his new pupil: instead of attending to the duties of the surgery, Humphry was rambling along the sea-shore, and often, like Demosthenes, declaiming against the wind and waves, in order to overcome a defect in his voice, which, although only slightly perceptible in his maturer age, was, when a boy, extremely discordant; instead of preparing the medicines for the doctor's patients, he was experimenting in the garret, and upon one occasion he produced an explosion that put the doctor and all his phials in jeopardy. At length, a negotiation between the parents and the master commenced, with a view of releasing the parties from their engagement; and we believe that Humphry returned home. It is, however, but fair to state, that he always entertained the highest respect for Mr. Tonkin, and never spoke of him but in terms of affectionate regard.

We shall here pause in our narrative, for the purpose of introducing a few anecdotes, which will serve not only to illustrate the early character of Davy, but to exhibit in their origin and growth several of those prominent peculiarities which distinguished him in after-life. That he was a boy of decision and courage, may be inferred from the fact of his having, upon receiving a bite from a dog, taken his pocket knife, and, without the least hesitation, cut out the part on the spot. The gentleman who related this anecdote observed, that he had frequently heard him declare his disbelief in the existence of pain, if the energies of the mind were directed to counteract it; but he added, that he very shortly afterwards had an opportunity of witnessing a practical refutation of this doctrine, for, upon being bitten by a fish, Sir Humphry roared out most lustily.

It is not difficult to understand how it happened, that a person endowed with the genius and sensibilities of Davy, should have had his mind directed to the study of mineralogy and chemistry, when we consider the nature and scenery of the country in which accident had planted him. Many of his friends and associates must have been connected with mining speculations; *shafts, cross courses, lodes, &c.* were words familiarised to his ears; and his native love of inquiry could not have long suf-

fered such terms to remain as unmeaning sounds. Nor could he wander along the rocky coast, nor repose for a moment to contemplate its wild scenery, without being invited to geological inquiry by the genius of the place; for, were that science to be personified, it would be impossible to select a more appropriate spot for her local habitation and favoured abode. "How often when a boy," said Sir Humphry to a friend, upon showing him a view of Botallack Mine, "have I wandered about those rocks in search after new minerals, and when tired, sat down upon those crags, and exercised my fancy in anticipations of scientific renown!"

Such scenery also, in one who possessed a quick sensibility to the sublime forms of nature, was well calculated to kindle that enthusiasm so essential to poetical genius. It accordingly appears that Davy drank of the waters of Helicon when only nine years old, and subsequently, composed a poem on the Land's End; in which he powerfully describes the magnificence of its convulsed scenery, the ceaseless roar of the ocean, the wild shrieks of the cormorant, and those "caves where sleep the haggard spirits of the storm." This bias he cultivated till his fifteenth year, when he became the pupil of Mr. (since Dr.) Borlase of Penzance, an ingenious surgeon, intending to prepare himself for graduating as a physician at Edinburgh. At this early age Davy laid down for himself a plan of education, which embraced the circle of the sciences; and by his eighteenth year he had acquired the rudiments of botany, anatomy, and physiology, the simpler mathematics, metaphysics, natural philosophy, and chemistry. But chemistry soon arrested his whole attention. As far as can be ascertained, the first original experiment performed by him at Penzance was for the purpose of investigating the nature of the air contained in the bladders of sea-weed. His instruments, however, were of the rudest description, manufactured by himself out of the motley materials which fell in his way: the pots and pans of the kitchen were appropriated without ceremony, and even the phials and gallipots of his master were without the least remorse put in requisition. While upon this subject, the following anecdote may not be unamusing:—

A French vessel having been wrecked near the Land's End, the surgeon became acquainted with young Davy, and, in return for some kind offices, presented him with his case of surgical instruments. The contents were eagerly turned out and examined; not, however, with any professional view of their utility, but in order to ascertain how far they might be convertible to philosophical purposes. The old fashioned and clumsy clyster apparatus was viewed with exultation, and seized with avidity. What violent changes, what reverses, may not be suddenly effected by a simple accident! so says the moralist—behold an illustration: in the brief space of an hour, did this long neglected and unobtrusive machine, emerging from its obscurity and insignificance, figure away in all the pomp and glory of a complicated piece of pneumatic apparatus. The most humble means may, undoubtedly,

* Mrs. Davy's maiden name was Grace Millett.

accomplish the highest objects,—the filament of a spider's web has been used to measure the motions of the stars; but that a worn-out clyster pipe could have thus furnished the first philosopher of the age with the only means of inquiry within his reach, certainly affords a whimsical illustration of the maxim. Nor can we pass over these circumstances without observing how materially they must have influenced the subsequent success of Davy as an experimentalist: had he in the commencement of his career been furnished with all those appliances which he enjoyed at a later period, it is more than probable that he might never have acquired that wonderful tact of manipulation, that ability of suggesting expedients, and of contriving apparatus, so as to meet and surmount the difficulties which must constantly arise during the progress of the philosopher through the unbeaten tracks and unexplored regions of science. In this art Davy certainly stands unrivalled; and, like his prototype Scheele, he was unquestionably indebted for his address to the circumstances which have been alluded to: there never, perhaps, was a more striking exemplification of the adage, that "Necessity is the parent of invention."

The next prominent occurrence in Davy's life was his introduction to Mr. Davies Giddy, now Mr. Gilbert, the present distinguished and popular president of the Royal Society. The manner in which this happened furnishes an additional instance of the power of mere accident in altering our destinies. Mr. Gilbert's attention was, from some trivial cause, attracted to the young chemist, as he was carelessly lounging over the gate of his father's house. A person in the company of Mr. Gilbert observed, that the boy in question was young Davy, who was much attached to chemistry. "To chemistry!" said Mr. Gilbert; "if that be the case I must have some conversation with him." Mr. Gilbert who, as is well known, possesses a strong perception of character, soon discovered ample proofs of genius in the youth; and liberally offered him the use of his library, or any other assistance that he might require, for the pursuit of his studies.

Another circumstance also occurred, which afterwards contributed to introduce Davy to notice. Mr. Gregory Watt, who had long been an invalid, was recommended by his physicians to reside in the west of England; and he accordingly went to Penzance, and lodged with Mrs. Davy. It may easily be supposed, that two kindred spirits would not be long in contracting an acquaintance and friendship. Before the formation of the Geological Society of London, which has been the means of introducing more rational and correct views in the science over which it presides, geologists were divided into two great parties,—Neptunists and Plutonists; the one affirming that the globe was indebted for its form and arrangement to the agency of water, the other to that of fire. It so happened, that the professors of Oxford and Cambridge ranged themselves under different banners: Dr. Beddoes was a violent and uncompromising Plutonist, while Professor Hailstone was as decided a Neptunist. The rocks of Cornwall were appealed to as

affording support to either theory; and the two professors, who, although adverse in opinion, were united in friendship, determined to proceed together to the field of dispute, each hoping that he might thus convict the other of his error. The geological combatants arrived at Penzance; and Davy became known to them, through the medium of Mr. Gilbert. Mr. Watt was also enthusiastic in his praise; and it so happening that at that time Dr. Beddoes had just established at Bristol his "Pneumatic Institution," for the purpose of investigating the medical powers of the different gases, he proposed to Mr. Davy, who was then only nineteen years of age, but who, in addition to the recommendations that have been mentioned, had prepossessed the professor in his favour by an essay in which was propounded a new theory of heat and light, to suspend his plan of going to Edinburgh, and to undertake the superintendence of the necessary experiments. This proposal Davy eagerly accepted. It is now generally acknowledged, that the art of physic has not derived any direct advantage from the application of a class of agents that held out the highest promise of benefit; and they are, accordingly, rarely used in the treatment of disease, except, perhaps, by a few ignorant or crafty empirics: The investigation, however, paved the way to some new and important discoveries in science; so that, although our philosophers failed in obtaining the treasure for which they so eagerly dug, they, at least, by turning up and pulverising the soil, rendered it fertile.

Such were the circumstances that first extricated Davy from the obscurity of his native town, and paved the way to an eminence which but very few philosophers in this or any other country have been able to attain. Davy was now constantly engaged in the prosecution of new experiments; in the conception of which, as he himself candidly informs us, he was greatly aided by the conversation and advice of his friend Dr. Beddoes. He was also occasionally assisted by Mr. W. Clayfield, a gentleman ardently attached to chemical pursuits, and whose name is not unknown in the annals of science; indeed, it appears that to him Davy was indebted for the invention of a mercurial air-holder, by which he was enabled to collect and measure the various gases submitted to examination. In the course of these investigations, the respirability and singularly intoxicating effects of nitrous oxide were first discovered; which led to a new train of research concerning its preparation, composition, properties, combinations, and physiological action on living beings; inquiries which were extended to the different substances connected with nitrous oxide, such as *nitrous gas*, *nitrous acid*, and *ammonia*; when, by multiplying experiments, and comparing the facts they disclosed, Davy ultimately succeeded in reconciling apparent anomalies; and, by removing the greater number of those difficulties which had obscured this branch of science, was enabled to present a clear and satisfactory history of the combinations of OXYGEN and NITROGEN.

These interesting results were published in a separate volume, entitled "*Researches, Chemical*"

mical and Philosophical, chiefly concerning Nitrous Oxide and its Respiration; by Humphry Davy, Superintendent of the Medical Pneumatic Institution." Of the value of this production, the best criterion is to be found in the admiration which it excited: its author was barely twenty-one years old, and yet, although a mere boy, he was hailed as the Hercules in science, who had cleared an Augean stable of its impurities. In a majority of cases, precocious merit enjoys but an ephemeral popularity; the sensations it excites are too vivid to be permanent, and the individual sinks into an obscurity rendered ten times more profound by the brilliancy of the flash which preceded it: but every event in Davy's life appeared as if it were created and directed for his welfare by a presiding genius, whose activity in throwing circumstances in his way was rivalled only by the energy and address with which he converted them to his purpose. The experiments to which we have alluded, favourably as they were received, would probably have shared the fate of many other discoveries, whose practical applications were not obvious; but, before the impression produced on the scientific world had lost its glow, Count Rumford was seeking for some rising philosopher, who might fill the chemical chair of the recently established Institution of Great Britain:—could there be any doubt as to whom he should apply? Davy was proposed, and immediately elected.

It would not be difficult to cite some personal anecdotes in order to show what an alteration was suddenly effected in the habits and manners of Davy by his elevation. But where is the man of twenty-two years of age to be found, unless the temperature of his blood be below zero, who could remain uninfluenced by such a change? Look at Davy in the laboratory at Bristol, pursuing with eager industry various abstract points of research; mixing only with a few philosophers, sanguine like himself in the investigation of chemical phenomena, but whose worldly knowledge was bounded by the walls of the institution in which they were engaged. Shift the scene—could the spells of an enchanter effect a more magical transformation? Behold him in the theatre of the Royal Institution! surrounded by an aristocracy of intellect, as well as of rank, by the flowers of genius, the élite of fashion, and the beauty of England,—whose very respirations were suspended in their eagerness to catch his novel and satisfactory elucidations of the mysteries of nature! We admit that his vanity was excited by such extraordinary demonstrations of devotion; that he lost that simplicity which constituted the charm of his character, and assumed the garb and airs of a man of fashion:—is it wonderful if, under such circumstances, the robe should not have always fallen in graceful draperies? But the charms of the ball-room did not allure him from the pursuits of the laboratory. He had a capacity for both, and his devotions to Terpsichore did not interfere with the rites of Minerva. So popular did he become, under the auspices of the Duchess of Gordon, and other leaders of fashion, that their *soirées* were considered incomplete without his presence; and yet the crowds that repaired to the Institution

in the morning were, day after day, gratified by newly devised and instructive experiments, performed with the utmost address, and explained in language at once the most intelligible and the most eloquent. He brought down Science from those heights which were before accessible only to a few, and placed it within the reach of all. He divested the goddess of all her severity of aspect, and represented her as attired by the Graces. It may be said, and indeed it has been said by some modern Zoilus, who has sought only to discover the defects of Davy, that his style was too florid and imaginative for communicating the plain lessons of truth. But let us consider the class of persons to whom Davy addressed himself: were they students, prepared to toil with systematic precision in order to obtain knowledge, as a matter of necessity? No, they were composed of the gay and the idle, who could be tempted to admit instruction only by the prospect of receiving pleasure. It has been well observed, that necessity alone can urge the traveller over barren tracks and snow-topped mountains, while he treads with rapture along the fertile vales of those happier climes where every breeze is perfume, and every scene a picture. But in speaking of Davy's lectures, as mere specimens of happy oratory, we do injustice to the philosopher: had he merely added the festoon and the Corinthian foliage to a temple built by other hands, he might not have merited any other eulogium; but the edifice was his own—he brought the stone from the quarry, formed it into a regular pile, and then with his masterly chisel added to its strength beauty, and to its utility grace.

On obtaining the appointment of Professor at the Royal Institution, Mr. Davy gave up all his views of the medical profession, and devoted himself entirely to chemistry.

In 1802, Mr. Davy, having been elected Professor of Chemistry to the Board of Agriculture, commenced a series of lectures before its members; which he continued to deliver every successive session for ten years, modifying and extending their views, from time to time, in such a manner as the progress of chemical discovery required. These discourses were published in the year 1813, at the request of the President and members of the Board; and they form the only complete work we possess on the subject of Agricultural Chemistry. When it is considered how many opportunities the author enjoyed of acquiring practical information from the intelligent members of the Board, and of putting to the test of experience the truth of those various theories which his science had suggested, it can scarcely be expected that another author should arise in the present times who will be able to produce a superior work. He has treated the interesting subject of manures with singular success; showing the manner in which they become the nourishment of the plant, the changes produced in them by the process of fermentation and putrefaction, and the utility of mixing and combining them with each other. He has also pointed out the chemical principles upon which depends the improvement of lands by burning and fallowing; he has elucidated the theory of convertible husbandry, founded on regular re-

tations of different crops; and, in short, has brought his knowledge to bear on various other agricultural questions connected with chemistry, which the limits of our memoir will not allow us to detail. We must not, however, omit to mention the important information he has afforded on the subject of the composition of different soils, and the methods to be adopted for their analysis. The processes in use for such an examination, previous to his time, were always complicated, and frequently fallacious: he simplified the operations, and introduced new and convenient apparatus for the purpose. Nor ought we to pass over in silence the curious results of his experiments on the quantity of nutritive matters contained in varieties of the different substances that have been used as articles of food, either for men or for cattle, by which he was enabled to explain numerous facts connected with the comparative excellence of different articles. Thus, for instance, in the south of Europe, hard, or thin-skinned wheat, is in higher estimation than soft, or thick-skinned wheat; a fact which he showed to depend upon the larger quantity of gluten and nutritive matter which the former contains.

In the year 1803, Davy was elected a Fellow of the Royal Society; he subsequently became its Secretary, and lastly its President. During a period of five-and-twenty years, he constantly supplied its Transactions with papers; and it is not too much to say, that no individual philosopher, in any age or country, ever contributed so largely in extending truth, or ever achieved so much in eradicating error. The theory of Lavoisier, which was received throughout Europe with the homage due to an oracle, and was even classed in certainty with the doctrine of gravitation—which had withstood all the assaults of the Stahlian philosophers, in Germany, Sweden, and Britain, and passed unimpaired through the most severe ordeals to which any system was ever exposed—yielded, in some of its most essential points, to the cool and dispassionate reasoning of Davy. It is impossible not to admire the candour and humility with which Davy alludes to the circumstance; in speaking of the experiments which it was "his good fortune to institute," he says, "the novel results, while they have strengthened some of the doctrines of the school of Lavoisier, have overturned others, and have proved that the generalizations of the Antiphlogistic philosophers were far from having anticipated the whole progress of discovery."

As the advantages afforded by the history of any great scientific discovery, consist as much in exhibiting step by step, the intellectual operations by which it was accomplished, as in detailing its nature, or in examining its relations with previously established truths, so must it prove highly interesting to fix the period at which Davy's mind was first directed to the subject of Voltaic electricity. In referring to the "Additional Observations," appended to his "Chemical Researches," it appears that he had no sooner heard of the curious experiments of Volta upon the effects produced by the contact of two inorganic bodies, than, with his characteristic quickness of per-

ception, he proceeded to inquire whether the fact, previously noticed by himself, of the conversion of nitrous gas into nitrous oxide by exposure to wetted zinc, might not depend upon galvanic action. It was the early habit of his mind, not only to originate new inquiries, but without delay to examine the novel results of other philosophers; and in numerous instances it would seem that he only required to confirm their accuracy, before he succeeded in rendering the application of them subservient to further discovery.

In examining the numerous memoirs which he presented to the Royal Society, it is impracticable to preserve their chronological succession, without losing sight of that fine intellectual thread by which the mind of their author was conducted through the intricate labyrinths of nature: we shall therefore, in the first place, present to the reader a brief analysis of those several memoirs, in which the laws of electricity have been so profoundly investigated, and its chemical agency so successfully and beautifully displayed in the separation of the elements of hitherto undecomposed bodies. It is impossible to enter upon the subject of galvanic electricity, without recurring to the circumstance which first demonstrated the existence of such an energy, and to the sanguine expectations which it excited. It was natural to believe, when we witnessed the powerful contraction of a muscular fibre by the contact of a metal, that the nature and operation of the mysterious power of vital irritability would be at length developed by a new train of research. It is a curious fact, that an experiment so full of promise to the physiologist should hitherto have failed in affording him any assistance; while the chemist, to whom it did not appear to offer one single point of interest, has derived from it a new and important instrument of research, which has already, under the guidance of Davy, multiplied discoveries with such rapidity, and to such an extent, that it is impossible to anticipate the limits of its power. Here, then, is another striking instance of a great effect produced by means apparently insignificant. Who could have imagined it possible that the spasmodic action produced in the limb of a frog, by the accidental contact of a pair of scissors, should have been the means of changing the whole system of chemistry,—of discovering substances whose very existence was never suspected,—of elucidating the theory of volcanoes and earthquakes, and, may we not add, of leading the way to a knowledge of the laws of terrestrial magnetism? Such an unexpected extension of an apparently useless fact, should dispose us to entertain a kinder regard for the labours of one another, and teach us to judge with diffidence of the results of science. A discovery which may appear incapable of application to-day, may be our glory to-morrow, and even wield the destiny of nations. The conic sections of Apollonius Pergæus remained useless for two thousand years: who could have supposed that, after the lapse of twenty centuries, they would have formed the basis of astronomy,—a science giving to navigation safety, guiding the pilot through unknown seas, and tracing for him in the hea-

vens an unerring path to his native shores! It has been well said by the accomplished author of *Lettres à Sophie*: "L'histoire des grands effets par les petites causes serait un livre bien curieux."

The first memoir presented to the Royal Society by Mr. Davy, was read on the 18th of June, 1801; and is entitled, "*An Account of some Galvanic Combinations, formed by the Arrangement of Single Metallic Plates and Fluids, analogous to the new Galvanic Apparatus of Volta; by Mr. Humphry Davy, Lecturer on Chemistry in the Royal Institution; communicated by Benjamin, count of Rumford, V. P. R. S.*" In order to appreciate the value of this paper, it must be remembered, that the agencies of two metals in exciting galvanic phenomena were at that time supposed to be directly connected with the different powers of such metals to conduct electricity. Davy was the first philosopher who corrected this error, and, in the paper before us, showed that the evolution of galvanic energy was connected with chemical action; an inference which he deduced from some experiments, by which he found that an accumulation of galvanic influence (exactly similar to that in the common pile, where two metals are used) might be produced by the arrangement of single metals, with different strata of fluids. This theory he established by a great variety of experiments, and showed that the alternation of two metals with fluids was no further necessary to the production of accumulated galvanic influence, than as it furnished two conducting surfaces of different degrees of oxidability; and that this production would take place, if single metallic plates were connected together by different fluids, in such a manner that one of their surfaces only should undergo oxidation, the arrangement being regular. He moreover ascertained that many of these arrangements could be made active, not only when oxidation, but likewise when other chemical changes were going on in some of their parts. Here, then, appeared the dawn of the electrochemical theory. The main fact stated in Davy's paper, namely, the relation between the energy of the pile and the oxidation of one of its metals by the interposed fluid, was readily admitted; but a question arose, whether the oxidation, instead of being the primary cause, might not be the effect of the electricity, set in motion by the contact of metals, endowed with different conducting powers. Upon this occasion, with an alacrity corresponding with the importance of the subject, Dr. Wollaston appeared in the arena, and at the meeting succeeding that at which Davy's paper was read, related to the society a series of experiments, which fully confirmed the views of Davy, and set the question for ever at rest. This fact illustrates some of the most prominent features in the scientific character of Wollaston,—the quickness of his perception, the solidity of his judgment, and, above all, the liberality and candour with which he lent his powerful aid for the promotion and advantage of a rival philosopher.

An interval of nearly five years now elapsed before Davy threw any further light upon this branch of science; but his energies had not

slumbered; he had been engaged in experiments of the most arduous and complicated description; and in presenting their results, he unfolded the mysteries of Voltaic action, and, as far as its theory goes, might almost be said to have perfected our knowledge of the galvanic pile. This grand display of scientific light burst upon Europe like a meteor, throwing its radiance into the darkest recesses, and opening to the view of the philosopher new and unexpected regions. The memoir in which these discoveries were announced constituted the Bakerian lecture; and was read before the Royal Society on the 20th November, 1806. We shall endeavour to offer as popular a review of its contents as the abstruse nature of the subject will allow. It had been observed, during some of the earliest chemical experiments with the voltaic pile, that when the purest water was submitted to the action of a current of electricity, acid and alkaline matter was separated at the opposite electrified surfaces. A fact so extraordinary necessarily excited various conjectures; and many believed that the bodies were actually generated by the action of the pile. Davy, however, soon negatived so unphilosophical a conclusion, and showed that they merely arose from the decomposition of the materials employed: he found, for instance, that the glass vessel, at its point of contact with the wire, was corroded; a fact which sufficiently explained the source of the alkali; while the animal or vegetable materials, employed as conductors, might be readily supposed to furnish the acid. He accordingly proceeded to work with cups of agate; and, at the suggestion of Dr. Wollaston, who again acted as a Mentor, he formed the connecting parts of well-washed asbestos. Thus then was every source of fallacy connected with the apparatus removed; but still the same production of saline matter appeared. What could be its origin? He repeated the experiments in cups of gold, and examined the purity of his water by evaporation in vessels of silver. At length he succeeded in recognising the source of this matter: it was of foreign origin, partly derived from the contents of the water, and partly from new combinations of gaseous matter. This was curious, but, after all, a discovery in itself of insignificant value, when compared with those which immediately flowed from it. The acid and alkaline matter then produced, it has been already stated, collected in the water round opposite poles; the former always appearing at the *positively* electrified, the latter at the *negatively* electrified surface. Was this a universal law? It was necessary to decide this question by more extended inquiries. The first series of experiments which he instituted for this purpose, embraced the decomposition of solid bodies, insoluble, or difficultly soluble in water. From the effects of the electrical agency on glass, already mentioned, he very reasonably expected that various earthy compounds might thus undergo changes under similar circumstances; and his conclusion was just. From sulphate of lime he obtained sulphuric acid in the positive, and a solution of lime in the negative cup. These experiments were extended to a great variety of other compounds, such as sul-

phate of strontia, fluato of lime, sulphate of baryta, &c., and with parallel results. Having thus far established the general law, he proceeded to inquire into the mode and circumstances under which these constituent parts were transferred to their respective poles; and he discovered, first, that acid and alkaline bodies, during the time of their electrical transfer, would pass through water containing vegetable colours, without affecting them, or combining with them; and secondly, that such bodies would even pass through chemical menstrua having stronger attractions for them, thereby showing that the same power which destroyed elective affinity in the vicinity of the metallic points, would likewise destroy or suspend its operation, throughout the whole of its circuit. Thus, proceeding step by step, with philosophic caution and unwearied perseverance, did he develop all the particular phenomena and details of his subject; his genius then took flight, and with an eagle's eye caught the plan of the whole. A new science was created; and so important and extensive were the applications of its principles in producing chemical composition and decomposition, that it justly derived the name of Electro-Chemistry. Its illustrious author, reasoning upon the phenomena it displayed, arrived at the plausible conclusion, that the power of electrical attraction and repulsion must be identical with chemical affinity. If this be true, we at once obtain a solution of the problem, and can explain the action of the electric fluid in disuniting the elements of chemical combinations; for it is evident, that if two bodies be held together by virtue of their electrical states, by changing their electricity we shall disunite them. In this view of the subject, every substance, it is supposed, has its own inherent electricity, some being positive, others negative. When, therefore, bodies in such opposite states are presented to each other, they will combine.

The fame of Davy, as a philosopher, may, with perfect confidence, be rested upon this single memoir. It is true that the discoveries immediately resulting from the application of the principles therein contained are more dazzling to ordinary minds, but in our judgment they are far less glorious. Does not Sir Isaac Newton deserve greater fame for his invention of Fluxions than for the calculations performed by the application of them? We do not hesitate in comparing these great philosophers, since each has enlightened us with discoveries alike effected by means of his own creation. Not only did both unlock the choicest casket of nature, but they had the superior merit of planning and constructing the key.

In a conversation between Sir Humphry Davy and a scientific friend, the former observed that a philosopher might always discover how posterity would appreciate his labours, from the opinion entertained of them by contemporary foreigners; who, being unbiassed by circumstances of personality or rivalry, will reduce every object to its just proportions and proper value. If such a standard be acknowledged, and if the posthumous fame of Davy be submitted to its measure, where is the philosopher in our times whose name will attain a

higher eminence? Let our readers recal to their recollection the bitter animosity which France and England entertained towards each other in the year 1807, and they will form some idea of the astounding impression which the Bakerian Lecture must have produced on the philosophers of Paris, when in despite of national prejudice and national vanity, it was crowned by the Institute of France with the prize of Napoleon. Thus did the Voltaic battery achieve what all the artillery of Britain could never have produced—a spontaneous and willing homage to English superiority! But let not this observation be considered as intended to convey the slightest degree of disrespect, or to encourage any feeling to the disparagement of the French chemists; on the contrary, it is even a question not easily answered, to which party belongs the triumph—to him who won the laurel crown, or to those who so nobly placed it on his brow. They set an example to future ages which may as materially advance the progress of science, as the researches which called it forth; they proved, to adopt the language of the Edinburgh Review, that the commonwealth of science is of no party, and of no nation; that it is a pure republic, and always at peace. Its shades are disturbed neither by domestic malice nor by foreign levy; they resound not with the cries of factions or of public animosity. Falsehood is the only enemy their inhabitants denounce, Truth, and her minister, Reason, the only leaders they follow.

We proceed to consider the splendid discovery of the composition of the fixed alkalies, which was announced in Davy's second Bakerian lecture, read before the Royal Society in 1807: and which was the direct result of an application of the laws of Voltaic decomposition, so admirably developed in his lecture of the preceding year. The memoir therefore affords a very happy instance of philosophical induction, the most brilliant results having been obtained through a chain of reasoning and experiment; and, with the exception, perhaps, of Newton's account of his first discoveries in optics, the annals of science cannot boast of such another monument of transcendent genius. Had it been true, as was at the time insinuated with singular inconsistency, and equal unfairness, that the decomposition of the alkalies was accidentally effected by the high power of the apparatus placed at his disposal, Davy's claims to our admiration would have assumed a very different character: in such a case he might be said to have forced open the temple by direct violence, instead of having discovered and touched the secret spring by which its portals were unclosed.

The fixed alkalies, as well as the earths, had formerly been suspected to contain metallic bases; but as no proof, nor even experimental indication of the fact, could be obtained, the idea was by many entirely abandoned; and, with regard to the former of these bodies, the supposition of their being compounds of hydrogen was considered more plausible, inasmuch as they maintained a striking analogy in sensible qualities, as well as in chemical habitudes, to ammonia, whose composition had been fully established; while the supposed relations between hydrogen and oxygen, the acknow-

ledged principle of acidity, added strength to the conjecture. Still, all the chemists in Europe had in vain attempted to effect their decomposition: they had been tortured by every variety of experiment which ingenuity could suggest, or perseverance accomplish, but all in vain: nor was the pursuit abandoned until indefatigable effort had wrecked the patience and exhausted every resource of the experimentalist. Such was the forlorn and disheartening position of the philosopher, when Davy proffered his assistance. He created new instruments, new powers, and fresh resources; and, interrogating Nature on a different plan, her long-cherished secret was revealed.

We have already explained the important fact, established by Davy, that during the development of principles from their various combinations, by Voltaic action, an attraction invariably subsists between oxygen and the positive pole, and inflammable matter and the negative pole: thus, in the decomposition of water, its oxygen was constantly transferred to the former, and its hydrogen to the latter. Furnished with such data, Davy proceeded to submit a fixed alkali to the most intense action of the galvanic pile; believing that if it contained any hydrogen, or other inflammable basis, it would be separated at its negative extremity, and if any oxygen, that it would appear at the opposite end. His first attempts were made on solutions of the alkalies; but, notwithstanding the intensity of the electric action, the water alone was decomposed, oxygen and hydrogen being disengaged with violent effervescence, and transferred to their respective poles. The presence of water thus appearing to prevent the desired decomposition, potass, in a state of igneous fusion, was submitted to experiment; when it was immediately evident that combustible matter of some kind, burning with a vivid light, was given off at the negative wire. After various trials, during the progress of which, the numerous difficulties which successively arose were as immediately combated by ingenious manipulation, a small piece of potass, sufficiently moistened by the breath to impart to it a conducting power, was placed on an insulated disc of platina, and connected with the negative side of the battery in a state of intense activity, and a platina wire communicating with the positive side, was at the same instant brought into contact with the upper surface of the alkali. What followed?—A series of phenomena, in strict accordance with those laws which Davy had previously discovered. The potass began to fuse at both its points of electrization; a violent effervescence commenced at the upper or positive surface, while at the lower or negative, instead of any liberation of elastic matter, which must have happened had hydrogen been present, small globules having the appearance of quicksilver were disengaged, some of which were no sooner formed than they burnt with explosion and bright flame. What must have been the sensations of Davy at this moment! He had decomposed the alkali, and discovered it to contain a metallic basis. The gaseous matter developed at the positive pole, was soon identified as oxygen; but to collect the metallic

matter at the opposite extremity, in a sufficient quantity for a satisfactory examination, was not so easy; for such was its attraction for oxygen, that it speedily reverted to the state of alkali by recombining with it. After various trials, Davy found that recently-distilled naphtha presented a medium in which it might be preserved, by covering the metal with a thin transparent film of fluid, which defended it from the action of the air, and at the same time allowed an accurate examination of its physical qualities. Thus provided, he proceeded to investigate the properties of the body; giving to it the name of *potassium*, and which may be described as follows. It is a white metal, instantly tarnishing by exposure to air; at the temperature of 70° Fahrenheit, it exists in small globules, which possess the metallic lustre, opacity, and general appearance of mercury; so that when a globule of mercury is placed near one of potassium, the eye cannot discover any difference between them. At this temperature, however, the metal is only imperfectly fluid; but when gradually heated, it becomes more and more fluid; and at 150°, its fluidity is so perfect, that several globules may easily be made to run into one. By reducing its temperature, it becomes at 50° a soft and malleable solid, which has the lustre of polished silver; it is soft enough, indeed, to be moulded like wax. At about the freezing point of water, it becomes hard and brittle, and exhibits when broken, a crystallized texture of perfect whiteness and high metallic splendour. It is also a perfect conductor of both electricity and heat. Thus far, then, it fulfils every condition of a metal; but we have now to mention a quality which has been as invariably associated with the idea of a metal as lustre; and its absence, therefore, in potassium, has given rise to a question whether, after all, it can with propriety be classed under this denomination; we allude to great specific gravity. Instead of possessing that ponderosity which we should have expected in a body otherwise metallic, it is so light as to swim not only upon the surface of water, but upon that of naphtha, by far the lightest fluid in nature. Thrown upon water it instantly decomposes the fluid, and an explosion is produced with a vehement flame; an experiment which is rendered more striking if, for water, ice be substituted. In this latter case it instantly burns with a bright flame, and a deep hole is made in the ice, filled with a fluid, which is found to be a solution of potass. It is scarcely necessary to state that this phenomenon depends upon the very powerful affinity which the metal possesses for oxygen, enabling it even to separate it from its most subtle combinations. The evidence afforded of the nature of the fixed alkali, potass, is thus rendered complete. It is a metallic oxide, or, in other words, a body composed of oxygen, and a metal of the most singular description, so light as to swim upon water, and so inflammable as to catch fire by contact with ice!

From these observations it will be immediately perceived, that the decomposition of the fixed alkali placed in the hands of the experimentalist a new instrument of analysis, scarcely less energetic or of less universal applica-

tion than the power from which the discovery emanated. So strong is the affinity of potassium for oxygen, that it discovers and decomposes the small quantities of water contained in alcohol and ether. But, perhaps, the most beautiful illustration of its deoxidizing power, is shown in its action on fixed air, or *Carbonic Acid*; when heated in contact with that gas, it catches fire, and by uniting with its oxygen becomes potash, while the liberated carbon is deposited in the form of charcoal.

Upon submitting soda to the electric battery, under circumstances such as those we have already described, a bright metal was obtained similar in its general character to potassium, but possessing distinctive peculiarities which it is not necessary to detail: to this substance Davy gave the name of *sodium*.

These important discoveries were followed up by an investigation into the nature of the earths; and the results were communicated in a paper, read before the Royal Society on the 30th of June in the same year. It appears that this investigation required still more refined and complicated processes than those which had succeeded with the fixed alkalis, owing to the infusible nature of the earths: the strong affinity of their bases for oxygen made it unavailing to act upon them in solution in water: and the only methods that proved successful, were those of operating upon them by electricity in some of the combinations, or of combining them at the moment of their decomposition by electricity, in metallic alloys, so as to obtain evidences of their nature and properties. It is impossible to follow the philosopher through all the intricate paths of this investigation: suffice it to say, that, although he was unable to produce the metallic bases of the earths in the same unequivocal form as he produced those of the alkalis, he furnished sufficient evidence of their being metallic oxides.

What an immense step was thus made in the investigation of Nature! In sciences kindred to chemistry, the knowledge of the composition of these bodies, and the analogies arising from it, have opened new views, and led to the solution of many problems. In geology, for instance, has it not shown that agents may have operated in the formation of rocks and earths, which have not hitherto been supposed to exist? It is evident that the metals of the earths cannot exist at the surface of our globe, but it is very probable that they may constitute a part of its interior; and such an assumption would at once offer a plausible theory for the phenomena of volcanoes, the formation of lavas, and the excitement and effects of subterraneous heat, and might even lead to a general hypothesis in geology. At a subsequent period, our illustrious chemist followed the subject up by numerous observations and experiments in a volcanic country. Whoever witnessed it, must remember with delight the beautiful display of his theory, as exhibited in an artificial volcano on the table of the Royal Institution. A mountain was modelled in clay, and a quantity of the "metallic bases" introduced into its interior; on water being poured upon it, the metals were soon thrown into violent action—successive explosions were

produced—boiling lava was seen flowing down its sides from a crater in miniature—mimic lightnings played around, and the tumultuous applause of the audience might almost, in the instant of dramatic illusion, have been mistaken for the shouts of the alarmed fugitives of Herculaneum or Pompeii.

Sir Humphry Davy's Bakerian Lecture of 1808, entitled, "An Account of some new Analytical Researches on the Nature of certain Bodies, particularly the Alkalies, Phosphorus, Sulphur, Carbonaceous Matter, and the Acids hitherto undecomposed; with some general Observations on Chemical Theory," abounds in elaborate experiments with the voltaic apparatus, made with the hope of extending our knowledge of the principles of bodies, by the new powers and methods arising from the application of electricity; but although it furnishes results of great interest, and records phenomena which may serve as guides in future inquiries, still it cannot be said to have astonished the chemical world by any brilliant discovery; and yet it announced the decomposition of boracic acid, and the development of its inflammable base at the negative surface of the battery,—a discovery which, at any other period, would have produced great excitement in the chemical world; but the fact is, that the splendour of his former lecture, like the blaze of the sun, left our organs of perception capable of receiving a just impression from any lesser light.

In reviewing his several memoirs upon voltaic electricity, we have illustrated the original, cautious, and yet intrepid advances of his mind; we are now about to notice a series of papers which manifest the zeal and industry with which he pursued the track of others. The similarity of the laws of electrical and magnetical attraction had long excited the attention of the philosopher, and numerous had been the attempts to establish the existence of an identity, or intimate relation, between these two forces; but little light had been thrown upon the subject before the year 1819, when M. Oersted, secretary to the Royal Society of Copenhagen, published an account of some experiments exhibited in his lecture before the University, by which it was demonstrated that the magnetic needle was moved from its position by the action of the galvanic apparatus. And it may be here necessary to state, that these experiments, unlike all preceding ones, were made with the two ends of the pile in communication with each other; to which circumstance are to be attributed the novel results that followed. In pursuing the investigation with a more powerful battery, M. Oersted fully ascertained that the phenomena exhibited by the needle did not depend upon electrical attraction and repulsion, for its movements were wholly at variance with such an explanation; they must depend, then, upon the production of a new energy, generated by the action of the two electricities thus brought into conflict, and which, if not identical with, must be nearly related to magnetism! It moreover appeared probable from the motions of the magnet, when differently placed with regard to the *conjunction* wire, or that wire by which the opposite ends of the battery were

connected, that this energy circulated, or performed a circular movement around the axis of the conductor, and thus drove the magnetic pole towards the east or west, according to the direction of the needle with reference to such a current. No sooner had this extraordinary discovery been announced in this country, than Sir Humphry Davy proceeded to repeat the experiments, and with his characteristic talent, to vary and extend them. The nature and limits of this memoir will not allow us to follow him: it is sufficient to say, that he obtained new results, and expanded the views which Oersted had opened. He particularly investigated the magnetizing powers of the conjunctive wires, and the circumstances under which they became effective: he found, for instance, that if a small steel bar be attached to the conjunctive wire, and parallel to it, it does not become a polar magnet; but that, if it be attached transversely, it does become polar, and that it becomes north and south, or south and north, according to the direction of the supposed electric current traversing the conjunctive wire, as one or the other end of it may be positive or negative. "In viewing these phenomena," says Sir Humphry, "a number of curious speculations cannot fail to present themselves to every philosophical mind; such as, whether the magnetism of the earth may not be owing to its electricity, and the variation of the needle to the alterations in the electrical currents of the earth, in consequence of its motions, internal chemical changes, or its relations to solar heat; and whether the luminous effects of the *auroras* at the poles are not shown by these new facts to depend on electricity." It is certainly evident, that, if strong electrical currents be supposed to follow the apparent course of the sun, the magnetism of the earth ought to be such as it is actually found to be; and to afford a popular illustration of this theory, Sir Humphry directed a sphere to be constructed, in which arrangements were made for passing the electricities, from the two ends of the battery, in the direction of the ecliptic, upon which the poles were found to become magnetic.

In accordance with the plan originally proposed for the review of Davy's labours, we shall next offer an account of his method for preventing the corrosion of the copper sheathing of ships by sea-water; which being founded upon voltaic principles, must be considered as properly falling under the head of his electrical researches. It appears that the Commissioners of the Navy, fully impressed with the evil arising from the destructive influence of sea-water upon the copper sheathing of his Majesty's ships of war, applied to the Council of the Royal Society, in the hope that some plan might be suggested for arresting, if not for preventing, the decay of so expensive an article. Sir H. Davy charged himself with the inquiry; and presented its results in a paper which was read before the Society on the 22d of January, 1824, and which was continued in another communication dated 17th of June, 1824, and concluded in a third, read 9th of June, 1825. We shall endeavour to put the reader in possession of the principal facts elicited by this inquiry. We have already

stated, that Davy had advanced the hypothesis, that chemical and electrical changes were identical, or dependent upon the same property of matter; and that he had shown that chemical attractions may be exalted, modified, or destroyed, by changes in the electrical states of bodies; that substances will only combine when they are in different electrical states; and that, by bringing a body, naturally positive, artificially into a negative state, its usual powers of combination are altogether destroyed: it was, in short, by an application of this very principle that he decomposed the alkalis; and it was from the same energetic instrumentality that he now sought a remedy for the rapid corrosion of copper sheathing. Let us see how dexterously he grappled with the difficulties of his subject. When a piece of polished copper is suffered to remain in sea-water, the first effects are, a yellow tarnish upon the surface, and a cloudiness in the water, which take place in two or three hours: the hue of the cloudiness is at first white, and it gradually becomes green. In less than a day a bluish-green precipitate appears in the bottom of the vessel, which constantly accumulates; this green matter appears principally to consist of an insoluble compound of copper (a *sub-muriate*) and hydrate of magnesia. Reasoning upon these phenomena, Davy arrived at the conclusion that copper could act upon sea-water only when in a positive state; and since that metal is only weakly positive in the electro-chemical scale, he considered that, if it could be only rendered slightly negative, the corroding action of sea-water upon it would be null. But how was this to be effected? At first, he thought of using a voltaic battery; but this could hardly be applicable in practice: he next thought of the contact of zinc, tin, or iron; but he was prevented for some time from trying this, by the recollection that the copper in the voltaic battery, as well as the zinc, was dissolved by the action of dilute nitric acid; and by the fear that too large a mass of oxidizable metal would be required to produce decisive results. After reflecting, however, for some time on the slow and weak action of sea-water on copper, and the small difference which must exist between their electrical powers, and knowing that a very feeble chemical action would be destroyed by a very feeble electrical force, he was encouraged to proceed; and the results were of the most satisfactory kind. A piece of zinc, as large as a pea, or the point of a small iron nail, was found fully adequate to preserve forty or fifty square inches of copper; and this, wherever it was placed, whether at the top, bottom, or in the middle of the sheet of copper, and whether the copper was straight or bent, or made into coils. And where the connexion between the different pieces of copper was completed by wires, or thin filaments of the fortieth or fiftieth of an inch in diameter, the effect was the same; every side, every surface, every particle of the copper remained bright, whilst the iron, or the zinc, was slowly corroded. A piece of thick sheet copper, containing, on both sides, about sixty square inches, was cut in such a manner as to form seven divisions, connected only by the smallest filaments that could be

left, and a mass of zinc, of the fifth of an inch in diameter, was soldered to the upper division. The whole was plunged under sea-water; the copper remained perfectly polished. The same experiment was made with iron; and after the lapse of a month, in both instances, the copper was found as bright as when it was first introduced, whilst similar pieces of copper, undefended, in the same sea-water, underwent considerable corrosion, and produced a large quantity of green deposit in the bottom of the vessel. Numerous other experiments were performed, and with results equally conclusive of the truth of the theory which had suggested them. It remained only that the experiments should be conducted on a large scale. The Lords Commissioners of the Navy accordingly gave Sir Humphry permission to ascertain the practical value of his discovery by trials upon ships of war; and the results, to use his own expression, even surpassed his most sanguine expectations. Sheets of copper, defended by from 1-40th to 1-1000th part of their surface of zinc, malleable and cast iron, were exposed, for many weeks, in the flow of the tide in Portsmouth harbour, their weights having been ascertained before and after the experiment. When the metallic protector was from 1-40 to 1-110, there was no corrosion nor decay of the copper; with small quantities it underwent a loss of weight. The sheathing of boats and ships, protected by the contact of zinc, cast and malleable iron in different proportions, compared with that of similar boats and sides of ships unprotected, exhibited bright surfaces, whilst the unprotected copper underwent rapid corrosion, becoming first red, then green, and losing a part of its substance in scales. Is it not, then, a fact, established beyond all controversy, that small quantities of electro-positive metals will prevent the corrosion or chemical changes of copper exposed to sea-water; and that the results appear to be of the same kind, whether the experiments are made upon a minute scale, and in confined portions of water, or on large masses, and in the ocean? How then has it happened,—for the fact is notorious, and has called forth many animadversions to the disparagement of Davy,—how has it happened that this scheme of protection has not been adopted? The fact is simply this, that in overcoming one evil, another has been created; by protecting the copper, the accumulation of sea weeds and marine insects has been favoured, and the ships thus defended by iron or zinc have become so foul, as scarcely to continue navigable. This would seem to depend upon several causes, especially upon the deposition of saline and calcareous matter, arising from the decomposition of marine salts. Had Davy's health remained unimpaired, his genius would, without doubt, have suggested a remedy; but he unfortunately declined in health at the very moment his energies were most required. Future philosophers may propose successful expedients to obviate the evil, but the glory of the discovery will justly belong to him who first developed the principle. Whether or not that principle can be rendered subservient to the protection of copper sheathing, it must at least be admitted that the results obtained by him are of the

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most interesting description, and capable of various useful applications; several of which he has himself suggested, whilst others have been discovered by the ingenuity of contemporary chemists. By introducing a piece of zinc, or tin, into the iron boiler of the steam-engine, we may prevent the danger of explosion, which generally arises, especially where salt-water is used, as in those of steam-boats, from the wear of one part of the boiler. Another important application is in the prevention of the wear of the paddles, or wheels, which are rapidly dissolved by salt-water. Mr. Pepys has extended the principle, for the preservation of steel instruments, by guards of zinc; and razors and lancets have been thus defended with perfect success.

Here, then, we conclude our history of the discoveries of Sir Humphry Davy, as they relate to the subject of voltaic electricity. They afford, without any exception, the most perfect specimen of philosophical induction ever recorded. He commenced by the discovery of a simple principle, which was pursued through all its relations and bearings; and during the whole progress of the inquiry, it does not appear that he had any occasion to retrace his steps for the purpose of correction. Justly has he observed, in his last Bakerian Lecture of 1826, that "notwithstanding the various novel views which have been brought forward in this and other countries, and the great activity and extension of science, it is peculiarly satisfactory to find that he has nothing to alter in the fundamental theory laid down in his original communication; and which, after the lapse of twenty years, has continued, as it was in the beginning, the guide and foundation of all his researches."

In the year 1805, Mr. Davy was elected a member of the Royal Irish Academy; and towards the close of the year 1810, he delivered a course of lectures before the Dublin Society, and received from Trinity College, Dublin, the honorary degree of LL.D.

In 1812, Mr. Davy married. The object of his choice was Jane, daughter and heiress of Charles Kerr, of Kelso, Esq., and widow of Shuckburgh Ashby Apreece, Esq., eldest son of the present Sir Thomas Hussey Apreece, Bart. By his union with this lady, Mr. Davy acquired not only a considerable fortune, but the inestimable treasure of an affectionate and exemplary wife, and a congenial friend and companion, capable of appreciating his character and attainments. On the 9th of April, only two days previously to his marriage, he received the honour of knighthood from the Prince Regent, being the first person on whom his Royal Highness conferred that dignity.

We now arrive at one of the most important results of Sir Humphry Davy's labours, viz. the invention of the safety-lamp for coal mines, which has been generally and successfully adopted throughout Europe. This invention has been the means of preserving many valuable lives, and preventing horrible mutilations, more terrible even than death. The general principle of the discovery may be described as follows:—

The frequency of accidents, arising from the explosion of the fire-damp, or inflammable
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gas, of the coal mines, mixed with atmospheric air, occasioned the formation of a committee at Sunderland, for the purpose of investigating the causes of these calamities, and of endeavouring to discover and apply a preventive. Sir Humphry received an invitation, in 1815, from Dr. Gray, one of the members of the committee; in consequence of which he went to the north of England, and visiting some of the principal collieries in the neighbourhood of Newcastle, soon convinced himself that no improvement could be made in the mode of ventilation, but that the desired preventive must be sought in a new method of lighting the mines, free from danger, and which, by indicating the state of the air in the part of the mine where inflammable air was disengaged, so as to render the atmosphere explosive, should oblige the miners to retire till the workings were properly cleared. The common means then employed for lighting the dangerous part of the mines consisted of a steel wheel revolving in contact with flint, and affording a succession of sparks: but this apparatus always required a person to work it, and was not entirely free from danger. The fire-damp was known to be light carburetted hydrogen gas; but its relations to combustion had not been examined. It is chiefly produced from what are called blowers or fissures in the broken strata, near dykes. Sir Humphry made various experiments on its combustibility and explosive nature; and discovered, that the fire-damp requires a very strong heat for its inflammation; that azote and carbonic acid, even in very small proportions, diminished the velocity of the inflammation; that mixtures of the gas would not explode in metallic canals or troughs, where their diameter was less than one-seventh of an inch, and their depth considerable in proportion to their diameter; and that explosions could not be made to pass through such canals, or through very fine wire sieves, or wire gauze. The consideration of these facts led Sir Humphry to adopt a lamp, in which the flame, by being supplied with only a limited quantity of air, should produce such a quantity of azote and carbonic acid as to prevent the explosion of the fire-damp, and which, by the nature of its apertures for giving admittance and egress to the air, should be rendered incapable of communicating any explosion to the external air. These requisites were found to be afforded by air-tight lanterns, of various constructions, supplied with air from tubes or canals of small diameter, or from apertures covered with wire-gauze, placed below the flame, through which explosions cannot be communicated, and having a chimney at the upper part, for carrying off the foul air. Sir Humphry soon afterwards found that a constant flame might be kept up from the explosive mixtures issuing from the apertures of a wire gauze sieve. He introduced a very small lamp in a cylinder, made of wire gauze, having six thousand four hundred apertures in the square inch. He closed all apertures except those of the gauze, and introduced the lamp, burning brightly within the cylinder, into a large jar, containing several quarts of the most explosive mixture of gas from the distillation of coal and air; the flame of the

wick immediately disappeared, or rather was lost, for the whole of the interior of the cylinder became filled with a feeble but steady flame of a green colour, which burnt for some minutes, till it had entirely destroyed the explosive power of the atmosphere. This discovery led to a most important improvement in the lamp, divested the fire-damp of all its terrors, and applied its powers, formerly so destructive, to the production of a useful light. Some minor improvements, originating in Sir Humphry's researches into the nature of flame, were afterwards effected. Experiments of the most satisfactory nature were speedily made, and the invention was soon generally adopted. Some attempts were made to dispute the honour of this discovery with its author, but his claims were confirmed by the investigations of the first philosophers of the age. The coal owners of the Tyne and Wear evinced their sense of the benefits resulting from this invention, by presenting Sir Humphry with a handsome service of plate worth nearly 2000*l.*, at a public dinner at Newcastle, October 11, 1817.

In 1813, Sir Humphry was elected a corresponding member of the Institute of France, and vice president of the Royal Institution. He was created a Baronet, October 20, 1818. In 1820, he was elected a foreign associate of the Royal Academy of Sciences at Paris, in the room of his countryman Watt; and in the course of a few years, most of the learned bodies in Europe enrolled him among their members.

Many pages might be occupied with the interesting details of Sir Humphry Davy's travels in different parts of Europe for scientific purposes, particularly to investigate the causes of volcanic phenomena, to instruct the miners of the coal districts in the application of his safety-lamp, to examine the state of the Herculaneum manuscripts, and to illustrate the remains of the chemical arts of the ancients. He analysed the colours used in painting by the ancient Greek and Roman artists. His experiments were chiefly made on the paintings in the baths of Titus, the ruins called the baths of Livia, in the remains of other palaces and baths of ancient Rome, and in the ruins of Pompeii. By the kindness of his friend Canova, who was charged with the care of the works connected with ancient art in Rome, he was enabled to select, with his own hands, specimens of the different pigments that had been found in vases discovered in the excavations which had been lately made beneath the ruins of the palace of Titus, and to compare them with the colours fixed on the walls, or detached in fragments of stucco. The results of all these researches were published in the *Transactions of the Royal Society* for 1815, and are extremely interesting. The concluding observations, in which he impresses the superior importance of permanency to brilliancy, in the colours used in painting, are especially worthy the attention of artists. On his examination of the Herculaneum manuscripts at Naples, in 1818-1819, he was of opinion they had not been acted upon by fire, so as to be completely carbonised, but that their leaves were cemented together by a substance formed during the fermentation and chemical change

of ages. He invented a composition for the solution of this substance, but he could not discover more than 100 out of 1265 manuscripts, which presented any probability of success.

Sir Humphry returned to England in 1820, and in the same year his respected friend, Sir Joseph Banks, President of the Royal Society, died. Several discussions took place respecting a proper successor, when individuals of high and even very exalted rank were named as candidates. But science, very properly in this case, superseded rank. Amongst the philosophers whose labours had enriched the transactions of the Royal Society, two were most generally adverted to, Sir Humphry Davy and Dr. Wollaston; but Dr. Wollaston, who had received from the council of the Society the unanimous compliment of being placed in the chair till the election by the body in November, declined any competition with his friend Sir Humphry Davy. Sir Humphry retained his seat as President till the year 1827, when, in consequence of procrastinated ill health, in great measure brought on by injuries occasioned to his constitution by scientific experiments, he was induced, by medical advice, to retire to the continent. He accordingly resigned his seat as President of the Royal Society, the chair being filled, *pro temp.* by Davies Gilbert, Esq. who, at the anniversary meeting, November 30, 1827, was unanimously elected President.

During his retirement on the Continent, Sir Humphry continued to communicate the results of his labours to the Royal Society; and at the anniversary meeting of the year 1827, one of the royal medals was awarded to him for a series of brilliant discoveries developing the relation between electricity and chemistry, and to which we have already alluded. Upon this interesting occasion, Mr. Davies Gilbert spoke as follows:—

"It is with feelings the most gratifying to myself, that I now approach to the award of a royal medal to Sir Humphry Davy; having witnessed the whole progress of his advancement in science and in reputation, from his first attempts in his native town, to vary some of Dr. Priestley's experiments on the extrication of oxygen from marine vegetables, to the point of eminence which we all know him to have reached.

"It is not necessary for me to do more than to advert to his discovery of nitrous oxide; to his investigation of the action of light on gases; on the nature of heat; to his successful discrimination of proximate vegetable elements; nor to his most scientific, ingenious, and useful invention, the safety-lamp,—an invention reasoned out from its principles with all the accuracy and precision of mathematical deduction.

"The particular series of discoveries for which the Royal medal has been awarded are those which develop the relation between electricity and chemistry.

"Soon after Sir Humphry Davy had been seated at the Royal Institution by an invitation from Count Rumford, an invitation founded on his first production,—a paper on the nature of heat,—our late President began his experiments and investigations on electric chemistry: a most powerful Voltaic apparatus was

fortunately placed at his disposal; and in his hands electric chemistry soon became the most important branch of practical science: important from its immediate energies and powers; but much more so from the general laws of nature, which it has laid open to our view.

"A new acidifying principle, or supporter of combustion, was discovered, possessing the same negative electric properties as oxygen. Muriatic acid disclosed its real composition. The oxymuriates were transferred to their proper class. The alkalis were reduced into metals; and the earths were proved to be similar oxides. But in the progress of these experiments a discovery was made, surpassing all the wonders attributed to alchemy. Three basins were arranged in a straight line, each containing water, and to the middle basin some neutral salt was added. The three were connected by moistened siphons of asbestos: the opposite piles of a Voltaic battery were then applied to the extreme vessels; and in a short time the neutral salt disappeared from the middle basin, and its constituent parts were found separated; the acid attracted to the positive pile of the battery, the alkali to the negative. This astonishing result, followed up by other experiments, led to the conclusion that chemical energies may be increased, diminished, or even inverted, by the superinduction of electric powers homogeneous with or dissimilar from their own. This metastasis in the hands of physiological inquirers promises to conduct them to discoveries of the utmost importance in the functions of life. I flatter myself that it is now actually in such hands.

"The principle of varying or modifying chemical energies by those of electricity, has been applied by the invention, in a manner the most philosophical, and on a scale the most extensive.

"The copper sheathing of ships and vessels had been found to corrode in the short period of a single voyage, being converted into an oxide through the medium of some acid, or at least of a decomposed substance, occupying the negative extremity of the electric scale. The copper must, therefore, be positive in respect to the body decomposed or attracted. A reference was made by the government to the Royal Society, with the hope of discovering some remedy for this most serious evil. Grounded on a perfect knowledge of chemical and of electric powers, it immediately occurred to the illustrious discoverer of their relations one to the other, that if a substance more positive than copper, and in contact with it, could be exposed to the corroding action, that the copper would, by induction, be rendered less positive, and, therefore, indisposed to combine with any other negative body.

"Experiments the most satisfactory were then made on a small scale; and in consequence of their success, plates of zinc, and afterwards of iron, were applied to ships' bows; and the copper has been fully and completely protected. The theory and the experiments have been confirmed in the most ample manner. A defect has, indeed, occurred in practice from the over success of protection. The induction of negative powers to the copper has gone too far; they have caused it to act on the compounds in an opposite direction, by attract-

ing to itself the earths and alkalies, thus affording attachments to the marine vegetables which the copper was intended to prevent. This appears to me, however, susceptible of a cure. I am sufficiently advanced in years to remember the American revolution war. Ships were then first sheathed with copper: they were preserved clean from weeds, nor was the copper corroded; but the ships were fastened together by iron bolts, and these, to the utter astonishment of every one, decayed; and the ships became unable to sustain the ordinary straining in gales of wind. For some time the effect could not be traced to its cause, for galvanism was then unknown; but at last bolts made of bronze were substituted for those of iron, and immediately the copper failed. When the theory has, therefore, been modified by experience on the principle of these empiric trials during the American war, I cannot hesitate in predicting complete practical success, with full glory to the illustrious individual who deduced the practice from theory, and with ample advantage to all those who may then bring the practice into beneficial use.

"Sir Humphry Davy having last year communicated a paper to the Society in continuation of his former inductions and generalization on chemical and electric energies, there cannot be a doubt but that the only obstacle against his then receiving a royal medal, on the first occasion that the Society had it to bestow, was his occupying this chair. That obstacle, unhappily for science, no longer exists; and the Royal Society take this earliest opportunity of testifying their high estimation of these talents and of these labours which all Europe admires. We trust and hope, although our late President has been induced by medical advice to retire from the agitation of active public stations, that his most valuable life will be long spared; and that energies of mind may still be displayed to this Society and to the civilized world, equal to those which have heretofore rendered immortal the name of Davy."

Sir Humphry Davy was, in every respect, an accomplished scholar, and was well acquainted with foreign languages. He always retained a strong taste for literary pleasures; and his philosophical works are written in a perspicuous and popular style, by which means he has contributed more to the diffusion of scientific knowledge than any other writer of his time. His three principal works are, "Chemical and Philosophical Researches," "Elements of Chemical Philosophy," and "Elements of Agricultural Chemistry," and the two last are excellently adapted for elementary study. His numerous pamphlets and contributions to the Transactions of the Royal Society have the same rare merit of conveying experimental knowledge in the most attractive form, and thus reducing abstract theory to the practice and purposes of life and society. The results of his investigations and experiments were not, therefore, pent up in the laboratory or lecture room where they were made, but by this valuable mode of communication, they have realized, what ought to be the highest aim of science, the improvement of the condition and comforts of every class of his fellow creatures.

Thus, beautiful theories were illustrated by inventions of immediate utility, as in the *safety-lamp* for mitigating the dangers to which miners are exposed in their labours, and the application of a newly discovered principle in preserving the life of the adventurous mariner. Yet splendid as were Sir Humphry's talents, and important as have been their application, he received the honours and homage of the scientific world with that becoming modesty which universally characterizes great genius.

Apart from the scientific value of Sir Humphry's labours and researches, they are pervaded by a tone and temper, and an enthusiastic love of nature, which are as admirably expressed as their influence is excellent. We trace no mixture of science and scepticism, and in vain shall we look for the spawn of infidel doctrine. The same excellent feeling breathes throughout "*Salmonia, or Days of Fly-fishing*," a volume published in 1828, and one of the most delightful labours of leisure ever seen. Not a few of the most beautiful phenomena of nature are here lucidly explained, yet the pages have none of the varnish of philosophical unbelief, or finite reasoning. The work is arranged in a series of conversations, and we are told in the preface, that "these pages formed the occupation of the author during several months of severe and dangerous illness, when he was wholly incapable of attending to more useful studies, or of following more serious pursuits. They formed his amusement in many hours, which otherwise would have been unoccupied and tedious." "The conversational and discursive styles were chosen as best suited to the state of the health of the author, who was incapable of considerable efforts and long continued exertion." The volume is dedicated to Dr. Babington, "in remembrance of some delightful days passed in his society, and in gratitude for an uninterrupted friendship of a quarter of a century;" and the likeness of one of the characters in the conversations to that estimable physician above named has been considered well drawn, and easily recognisable by those who enjoy his acquaintance. Many of the passages in *Salmonia* are expressed with great force and beauty, and they sometimes soar into sublime truths. For instance:—

"A full and clear river is, in my opinion, the most poetical object in nature. Pliny has, as well as I recollect, compared a river to human life. I have never read the passage in his works, but I have been a hundred times struck with the analogy, particularly amidst mountain scenery. The river, small and clear in its origin, gushes forth from rocks, falls into deep glens, and wantons and meanders through a wild and picturesque country, nourishing only the uncultivated tree or flower by its dew or spray. In this, its state of infancy and youth, it may be compared to the human mind in which fancy and strength of imagination are predominant—it is more beautiful than useful. When the different rills or torrents join, and descend into the plain, it becomes slow and stately in its motions; it is applied to move machinery, to irrigate meadows, and to bear upon its bosom the stately barge;—in this mature state, it is deep, strong, and use-

ful. As it flows on towards the sea, it loses its force and its motion, and at last, as it were, becomes lost and mingled with the mighty abyss of waters."

Again:—

"I envy no quality of the mind or intellect in others; not genius; power, wit, or fancy; but if I could choose what would be most delightful, and I believe most useful to me, I should prefer a firm religious belief to every other blessing; for it makes life a discipline of goodness—creates new hopes, when all earthly hopes vanish; and throws over the decay, the destruction of existence, the most gorgeous of all lights; awakens life even in death, and from corruption and decay calls up beauty and divinity; makes an instrument of torture and of shame the ladder of ascent to paradise; and, far above all combinations of earthly hopes, calls up the most delightful visions of palms and amaranths, the gardens of the blest, the security of everlasting joys, where the sensualist and the sceptic view only gloom, decay, annihilation, and despair!"

How beautiful is the following passage, in which (as has been justly observed by one of the most eminent men yet left to us*) the angler seems to contemplate nature with the eye at once of a poet and a philosopher!—

"The fisher for salmon and trout with the fly employs not only machinery to assist his physical powers, but applies sagacity to conquer difficulties; and the pleasure derived from ingenious resources and devices, as well as from active pursuit, belongs to this amusement. Then, as to its philosophical tendency, it is a pursuit of moral discipline, requiring patience, forbearance, and command of temper. As connected with natural science, it may be vaunted as demanding a knowledge of the habits of a considerable tribe of created beings—fishes, and the animals that they prey upon, and an acquaintance with the signs and tokens of the weather and its changes, the nature of waters, and of the atmosphere. As to its poetical relations, it carries us into the most wild and beautiful scenery of nature; amongst the mountain lakes, and the clear and lovely streams that gush from the higher ranges of elevated hills, or that make their way through the cavities of calcareous strata. How delightful in the early spring, after the dull and tedious time of winter, when the frosts disappear, and the sunshine warms the earth and waters, to wander forth by some clear stream, to see the leaf bursting from the purple bud, to scent the odours of the bank perfumed by the violet, and enamelled, as it were, with the primrose and the daisy; to wander upon the fresh turf below the shade of trees, whose bright blossoms are filled with the music of the bee; and on the surface of the waters to view the gaudy flies sparkling like animated gems in the sunbeams, whilst the bright and beautiful trout is watching them from below; to hear the twittering of the water-birds, who, alarmed at your approach, rapidly hide themselves beneath the flowers and leaves of the water-lily; and as the season advances, to find all these ob-

jects changed for others of the same kind, but better and brighter, till the swallow and the trout contend, as it were, for the gaudy May-fly, and till in pursuing your amusement in the calm and balmy evening you are serenaded by the songs of the cheerful thrush and melodious nightingale, performing the offices of paternal love, in thickets ornamented with the rose and woodbine."

Sir Humphry spent nearly the whole of the summer of 1828 in fowling and fishing in the neighbourhood of Laybach; and it has been related by a gentleman who accompanied him on a shooting excursion, that the relative weight of the various parts of each bird, the quantity of digested and undigested food, &c. were carefully noted down by the observant naturalist. It is believed that he was preparing for a large work on natural history.

The great philosopher closed his mortal career at Geneva. He had arrived in that city only the day before, namely, Friday, the 29th of May, 1829; having performed his journey from Rome by easy stages, without feeling any particular inconvenience, and without any circumstances which denoted so near an approach to the payment of the last debt of nature. During the night, however, he was attacked with apoplexy; and he expired at three o'clock on the morning of the 30th. Sir Humphry had been for some months a resident at Rome, where he had had a serious and alarming attack of a paralytic nature, but from which he was apparently, though slowly, recovering; although his most sanguine friends hardly ventured to hope that his valuable life would be much longer preserved. Lady Davy had joined him in Rome, on hearing of his alarming state, as had also his brother, Dr. John Davy, physician to the forces in Malta.

The event was no sooner known than his afflicted widow received the condolences and affectionate offers of services of the most distinguished individuals of Geneva; amongst whom were M. A. de Condolle the eminent botanist, and M. Sismondi the historian; both equally beloved for their amiable character, and illustrious throughout Europe for their works. M. de Condolle took charge of all the details of the interment; and the government of the Canton, the Academy of Geneva, the Consistory of the Genevan church, and the Societies of Arts, and of Natural Philosophy and History, together with nearly all the English residents, accompanied the remains to the burying-ground, where the English service was performed by the Rev. John Magers, of Queen's College, and the Rev. Mr. Burgess. The members of the Academy took their place in the funeral procession; and the invitations to the Syndicate, and to the learned bodies who accompanied it, were made by that body. The whole was conducted with much appropriate order and decency; and whilst every attention and respect were paid to the memory of an individual, who had done his ample share of good to mankind during his life, and whose name will be handed down to posterity amongst those who have most eminently contributed to spread the bounds of science, nothing was attempted to step beyond the limits of that unostentatious simplicity which Sir Humphry

* In a notice of "Salmonia" in the Quarterly Review.

had frequently declared to be his wish, whenever his mortal remains should be conveyed to their last home.

The procession which followed the corporate bodies, and the countrymen of the deceased, was joined by many of the most eminent manufacturers of the city, and a large body of mechanics, who were anxious to pay this tribute of regard and of gratitude for one whom they deservedly looked upon as a great benefactor to the arts, and promoter of the sciences, by the application of which they earned their livelihood.

Sir Humphry having died without issue, his baronetcy has become extinct. The "allusive" arms assigned to him by the heralds, are, Sable, a chevron engrailed Ermine, between two annulets in chief Or, and in base a flame Proper, encompassed by a chain Sable, issuant from a civic wreath Or. Crest: out of a civic wreath Or, an elephant's head Sable, ear Or, tusks Argent, the proboscis attached by a line to a ducal coronet around the neck Or. Motto, *igne constrictio vita securo*.

The following works, of which Sir Humphry Davy is the author, attest the debt which the world owes to his great mind and meritorious exertions.

Chemical and Philosophical Researches, chiefly concerning Nitrous Oxide and its Respiration. 1800, 8vo.

A Syllabus of a Course of Lectures on Chemistry at the Royal Institution. 1802, 8vo.

A Discourse, introductory to a Course of Lectures on Chemistry. 1802, 8vo.

Electro-Chemical Researches on the Decomposition of the Earths; with Observations on the Metals obtained from the Alkaline Earths, and an Amalgam procured from Ammonia.

Lecture on a Plan for improving the Royal Institution, and making it permanent. 1810, 8vo.

Elements of Chemical Philosophy. 1812, 8vo.

Elements of Agricultural Chemistry, in a Course of Lectures before the Board of Agriculture. 1813, 4to, and 8vo.

Practical Hints on the Application of Wire Gauze to Lamps, for preventing Explosions in Coal Mines. 1816, 8vo.

Six Discourses delivered before the Royal Society, at their Anniversary Meetings, on the Award of the Royal and Copley Medals; preceded by an Address to the Society, delivered in 1800, on the Progress and Prospects of Science. 4to.

The following chronological series will show the number and value of the articles contributed by Sir Humphry to the Philosophical Transactions:—

Account of some Galvanic Combinations formed by the Arrangement of single Metallic Plates and Fluids, analogous to the new Galvanic Apparatus of M. Volta. 1801.

Account of some Experiments and Observations on the constituent Parts of certain astringent Vegetables, and on their Operation in Tanning. 1803.

An Account of some analytical Experiments on a Mineral Production from Devonshire,

consisting principally of Alumine and Water. 1805.

On a Method of analysing Stones, containing fixed Alkali, by means of the Boracic Acid. *Ibid*.

The Bakerian Lecture on some Chemical Agencies of Electricity. 1807.

The Bakerian Lecture on some new Phenomena of Chemical Changes produced by Electricity, particularly the Decomposition of the fixed Alkalies, and the Exhibition of the new Substances which constitute their Basis, and on the general Nature of Alkaline Bodies. 1808.

The Bakerian Lecture; an Account of some new analytical Researches on the Nature of certain Bodies, particularly the Alkalies, Phosphorus, Sulphur, Carbonaceous Matter, and the Acids hitherto undecomposed; with some general Observations on Chemical Theory. 1809.

New Analytical Researches on the Nature of certain Bodies; being an Appendix to the Bakerian Lecture for 1808.

The Bakerian Lecture for 1809, on some new Electro-Chemical Researches, on various Objects, particularly the Metallic Bodies from the Alkalies and the Earths, and on some Combinations of Hydrogen. 1810.

Researches on the Oxymuriatic Acid, its Nature and Combinations, and on the Elements of the Muriatic Acid; with some Experiments on Sulphur and Phosphorus, made in the Laboratory of the Royal Institution. *Ibid*.

The Bakerian Lecture, on some of the Combinations of Oxymuriatic Gas and Oxygen, and on the Chemical Relations of these Principles to inflammable Bodies. 1811. Also another paper in the same volume in continuation of this subject.

On some Combinations of Phosphorus and Sulphur, and on some other Subjects of Chemical Inquiry. 1812.

Two papers on a new Detonating Compound. 1813.

Some Experiments and Observations on the Substances produced in different Chemical Processes on Fluor Spar. *Ibid*.

An Account of some new Experiments on the Fluoric Compounds; with some Observations on other Objects of Chemical Inquiry. 1824.

Some Experiments and Observations on a new Substance, which becomes a violet-coloured Gas by Heat. *Ibid*.

Further Experiments and Observations on Iodine. *Ibid*.

Some Experiments on the Combustion of the Diamond, and other carbonaceous Substances. *Ibid*.

Some Experiments and Observations on the Colours used in Painting by the Ancients. 1815.

Some Experiments on a solid Compound of Iodine and Oxygen, and on its Chemical Agencies. *Ibid*.

On the Action of Acids on the Salts usually called Hyperoxymuriates, and on the Gases produced from them. *Ibid*.

On the Fire-damp of Coal-mines, and on Methods of Lighting the Mines so as to prevent Explosion; an Account of an Invention

for giving Light in explosive Mixtures of Fire-damp in Coal-Mines, by consuming the Fire-damp; and further Experiments on the Combustion of explosive Mixtures confined by Wire Gauze; with some Observations on Flame. 1816.

Some Researches on Flame; and some new Experiments and Observations on the Combustion of Gaseous Mixtures; with an Account of a Method of preserving continued Light in Mixtures of inflammable Gases and Air, without Flame. 1817.

On the Fallacy of the Experiments in which Water is said to have been formed by the Decomposition of Chlorine. 1818.

New Experiments on some of the Combinations of Phosphorus. *Ibid.*

Observations on the Formation of Mists in particular Situations. 1819.

On the Magnetic Phenomena produced by Electricity.

Observations and Experiments on the Papyrus found in the Ruins of Herculaneum.

Researches on the Magnetic Phenomena produced by Electricity, with some new Experiments on the Properties of Electrified Bodies, in their relation to their conducting Powers and Temperature.

On the Electrical Phenomena exhibited in Vacuo.

On the State of Water and Aeriform Matter in Cavities found in certain Crystals.

On a new Phenomenon of Electro-magnetism.

On the Condensation of Muriatic Gas into the liquid Form.

On the Application of Liquids formed by the Condensation of Gases as Mechanical Agents.

Experiments and Observations on the Application of Electrical Combinations to the Preservation of the Copper Sheathing of Ships.

The Bakerian Lecture on the Relations of Electrical and Chemical Changes. 1826.

On the Phenomenon of Volcanos. 1828.

An Account of some Experiments on the Torpedo.

To Nicholson's Journal he communicated,—

An Account of some Experiments made with the Galvanic Apparatus of Signor Volta. 1801.

Note respecting the Absorption of Nitrous Gas, by Solutions of Green Sulphate and Muriate of Iron. 1802.

To the Philosophical Magazine,—

A few additional Practical Observations on the Wire-gauze Safety Lamps for Mines. 1816.

Suggestions arising from Inspections of Wire-gauze Lamps in their working State in Mines. *Ibid.*

For by much the larger and more valuable portion of the materials of which the foregoing memoir has been composed we are indebted to a series of able and interesting papers published in the "Spectator," and we believe justly attributed to a gentleman himself of the highest scientific attainments; and who, we are happy to understand, is at present employed in preparing for the press a detailed and authentic life of his illustrious friend.

From the British Magazine.

COUNTRY CLERGYMEN.

BY MRS. HOFLAND.

BEHOLD two different men in sacred garb
Speed to the house of prayer—they walk as
friends,

Yet rarely do we meet in social life
Friends in such opposites. He on the left,
Of slender form, and lightly buoyant step,
Which like his sparkling eye, defies the touch
Of that magician who hath stained his locks,
Looks smilingly and kind, on all around,
As on a flock beloved—his speech is sweet,
And humbly cheerful, as of one who feels
Contentment in his office, and himself,
Yet holds it meekly, and dependently,
As a good gift from the great donor's hand,
Who may resume it ere to-morrow's sun.

The other with a stately step, and slow,
Looks not to right, or left—his towering form,
And gait majestic—his scanty speech,
Reluctantly bestowed—his eye upturned—
Bespeak far different feelings, aims, and
thoughts:

Yet stranger, pause—thou must not dare pro-
nounce

Censure on "priestly pride," "hypocrisy,"
Or other sins, which giddy ignorance
Might deem his failing—know that both are
good,

Both wise ambassadors from that dread King,
Whom with true hearts they worship—but dis-
tinct

Are they by nature, and not less distinct
In worldly circumstance. The first is he
Who fills our Vicarage, and merits well
His pleasant affluence—the other long
Like a strong bark hath striven with adverse
waves,

And now cut off from learning's hallowed
seats,

From hope's delusions, and from beauty's
smile,

Seeks the poor shelter of a Curate's home.

The man with heart at ease, and prone to feel
Life's sweetest charities, exults to think
How much he can bestow—the other feels
In his keen sense of blighted fortune now,
How much he must receive—he only prays
For more humility—his heart is full,
His mind abstracted; yet that heart is soft,
That mind of noble bearing;—cold and stern
Stands the lone ice-berg on the wintry waste,
But melts and sparkles in the summer sun.
And thus in time his hour of joy may come,
His hour of bounty and benignity—
Heaven speed the day!

From the same.

BOYHOOD.

BY CHARLES SWAIN.

THE dreams of early youth,
How beautiful they are—how full of joy,
When fancy looks like truth,
And life shows not a taint of sin's alloy.

When every heart appears
The temple of high thought and noble deed;
When our most bitter tears
Fall o'er some melancholy page we read!
The summer morn's fresh hours,
Her thousand woodland songs—her glorious
hues—
Oh! life's so full of flowers,
The difficulty *then*, is where to choose.
The wonderful blue sky—
Its cloudy palaces,—its gorgeous fanes—
The rainbow tints which lie
Like distant golden seas near purple plains.
These never shine again
As once they shone upon our raptured gaze;
The clouds which may remain,
Paint *other* visions than in those sweet days!
In hours thus pure—sublime—
Dreams we would make realities: life seems
So changed in after time,
That we would wish realities were dreams!

From the Edinburgh Philosophical Review.

BIOGRAPHICAL MEMOIR OF M. CORVISART.

BY BARON CUVIER.

JEAN NICOLAS CORVISART was born on the 15th February, 1745, at Dricourt, a village in the department of the Ardennes, whither his father, an attorney at Paris, had retired, during one of those banishments of the parliament, which the quarrels of that body with the clergy so frequently occasioned during the reign of Louis XV. The duties of an attorney, exercised with talent and probity, yielded sure profits, and would have enriched M. Corvisart, the father; but he is said to have had a passion for painting, without knowing much about it, and, what he gained by defending his clients, he laid out in purchasing bad pictures. Being not more skilled in human nature, he, for a long time, persisted in wishing his son to follow his own profession, and kept him for whole days copying law papers. The young man, who was of a lively and ardent disposition, felt that he had been born for less monotonous occupations. A vague uneasiness disquieted him, his law studies became every day more insupportable, and, perhaps, he would have fallen into great irregularities, had he not, on one of those festive rambles in which he indulged himself, whenever he could escape the eye of his father, entered by chance the lecture room of Anthony Petit, one of the most eloquent men who have been professors of anatomy and medicine during the eighteenth century. On hearing the impressive discourse of that master, and attending to the majestic development of ideas, whose novelty equalled their extent, the young Corvisart recognised the profession for which he was designed. He longed to study the animal economy, and for this purpose he determined to be a physician. From this moment, despatching early in the morning the writings which his father had prescribed for him as the work of the day,

and requesting the clerks, his companions, to keep his secret, he occupied all the hours that he could spare in attending the lectures of Petit, Louis, Dessault, Vicq d'Azyr, and our estimable fellow member M. Portal. His father at length perceiving his want of assiduity, inquired into the cause of his conduct, and discovered it; but, finding that it was now too late to restrain him, he permitted him to direct his whole attention to his new career. The Academy has possessed many members, whom an irresistible propensity has thus led to escape from the more humble plans which their relations had formed for them, and this perseverance in seeking a profession, in defiance of all obstacles, would undoubtedly be a good test for the choice of one; but how many young persons would be found whom these obstacles would not completely arrest, or who would not enter on courses worse than idleness or irresolution?

The mode of teaching medicine was then very far removed from the extent and regularity which it has since attained. The Faculty of Paris, an ancient body, organized in the middle ages, had scarcely made any change in a system of government that dated back five centuries. With the title of Doctor, all its members received the right of teaching; but they did not become bound to teach. It was only by chance that a sufficient number ever devoted themselves to the task of insuring a regular course of lectures to youth. Some professorships were, indeed, instituted in the Faculty, but their fee was wretchedly small. The professors were changed every two years, the young doctors being made to occupy these chairs in regular succession. They hastened to get through their drudgery, in order to acquire the title of Regent Doctor, and entering on office without the preparation of study, they retired without having formed themselves by practice. Besides, there were no public lectures at the beds of the sick. In order to see a few patients, the students accompanied the elder physicians in their visits; afterwards, when these elder physicians were unwell, or too much busied with practice, they acted for them, and thus they continued, till at length they, too, slowly attained their professional rank.

M. Corvisart, to whose ardent genius this tedious progress could not fail to be singularly disagreeable, had yet the patience to conform himself to it in every point; but he chose his masters as a man destined to become one himself. Desbois de Rochefort, chief physician of La Charité, and Demault, chief surgeon of the Hôtel-Dieu, in the healing art two of the most eminent men of their time, became his principal patrons. It is well known that Desbois de Rochefort had the great merit of first showing the example of regularly delivering clinical lectures in his hospital. Under his guidance, M. Corvisart for several years occupied himself in the observation of diseases, and in the opening of bodies. For this task he had a real passion. The melancholy spectacles which it displays, the dangers to which it is liable, neither repelled nor discouraged him. A puncture which he had received while dissecting, brought him almost to the point of death, and

he is said to have escaped only through the assiduous care which Dessault lavished on him. He also, at a very early period, delivered in his own house lectures—not on medicine properly so called (for he did not think that so young a doctor could conscientiously do so), but on anatomy and physiology; and his perspicuity and ardour attracted a crowd of hearers. Nothing more was wanting to him, but to be himself at the head of an hospital, where he could freely pursue the views which his growing experience suggested to him. The first masters of the art judged him worthy of one, and he thought himself on the point of attaining this object of his wishes, when a cause the most trifling in the world kept him back for several years. The customs and dress of physicians were scarcely less antique than the system of government of the Faculty.

If Molière had made them lay aside the gown and the pointed cap, they had at least preserved the full-bottomed wig, which no one else any longer wore, and it was on entering into office that they had to muffle themselves in it. It is affirmed that M. Corvisart and M. Hallé were the first who gave the scandal of not assuming it, and that this levity, as it was called, proved very hurtful to them. It is at least certain, that, on the occasion of which we speak, it was the cause of M. Corvisart's disappointment, and that through the person from whom he had least reason to expect it. A celebrated lady, whose husband was the cause, at least the incidental cause, of the greatest innovations that have taken place in France since the establishment of the monarchy, had just founded an hospital, and M. Corvisart ardently wished to obtain the charge of it; but he presented himself in his natural hair, and this innovation she dared not take upon herself to countenance. At the first word she declared to him that her hospital should never have a physician without a wig, and it was for him to choose between that head-dress and his exclusion. He preferred keeping his hair.

By a happy contrast, and when probably he had not greater expectations, it was a monk who, on another occasion, did him more justice. On the death of Desbois de Rochefort, which happened in 1788, the superior of the ecclesiastics attached to the Hôpital de la Charité, a man held in great estimation for his wisdom and his zeal in favour of the sick, and who had been daily witness of M. Corvisart's assiduous cares, employed his credit in getting him attached to that house, and succeeded in the endeavour. From this time, M. Corvisart, continuing the clinical instructions of his predecessor, saw all the young physicians attend his lectures. He excited admiration by possessing in an eminent degree the talent of discovering from the first moment the nature of diseases, and of foreseeing their progress and event. His fellow-practitioners were not slow in doing him full justice, and he was already considered as one of the first masters in the capital, when, in 1795, Fourcroy procured a chair to be founded for him in the New School of Medicine. Two years after, in 1797, he was appointed to the professorship of medicine in the College of France, and there found

himself in the capacity of teaching the art in a theoretical point of view, as he had hitherto shown it practically. The same pupils who heard him in the one school explain the general principles, went to see in the other their happy application, and in all things found him correct, ardent, and obliging in the highest degree. In every thing his pleasing eloquence, his lively temper, his sure and quick tact, excited the highest admiration. If any one had a feeling of repugnance to an art condemned to witness such melancholy scenes, he had only to hear M. Corvisart for some time to become an enthusiast in it.

Already all Europe rung with his fame, when, in 1802, he was raised to the highest post in his profession, and yet this elevation was not alone the result of his renown. Every one remembers that it was put to the proof, and that, on being called into consultation respecting an affection of the chest, which threatened the chief of the government, he first discovered its cause, and effected its removal.

His success, however, had not inspired him with an implicit faith in medicine. It is even said that the mistakes which, notwithstanding his great sagacity, sometimes happened to him, gave him the greatest vexation, and made him, in those moments of discouragement, speak ill of his art; nor did he like those works in which it was pretended to assign precise characters, and a regular progress to each disease, and from which young persons might form of medicine an idea similar to that afforded by the physical sciences, properly so called, and still less those in which it is presented in a deceitful simplicity, under the idea of referring diseases and remedies to a small number of forms,—it was not thus that he viewed it. Organized beings have their certain laws, each of them conforms to the type of its species; but the disorders which introduce themselves into their organization, are subject to endless combinations; each day this may assume a different complication; and it is from the whole symptoms of each moment, taken together, that they are to be judged of, and combated. Nor did any one pay more attention to these sensible signs. The best physician, according to him, was he who had succeeded in giving to his senses, the greatest delicacy. He did not attend solely to the pains felt by the patient, to the variations of his pulse, or of his respiration. A painter could not have better distinguished the shades of colour, nor a musician all the qualities of sounds. The slightest alterations of the complexion, of the colour of the eyes and lips, the different intonations of the voice, the smallest differences in the muscles of the face, fixed his attention. Even the variations of the breath and transpiration were carefully measured by him, and, in the judgment which he formed, nothing of all this was a matter of indifference. The innumerable openings of bodies, which he had made, had enabled him to remark the correspondence of the slightest external appearances with the internal lesions. He is said to have distinguished, at the distance of several beds, the disease of an individual that had just come to the hospital; and, with respect to the disorganizations of the heart,

and great vessels in particular, he had attained to a truly wonderful accuracy of divination. His decisions were irrevocable, like those of destiny. Not only did he predict the fate that awaited each patient, and the period at which the catastrophe was to happen, but he gave, beforehand, the measure of the swellings, dilations, and contractions of all the parts; and the opening of the bodies scarcely ever refuted his announcements. The most experienced, it is said, were utterly astonished by them.

His two principal works, the *Treatise on the Diseases of the Heart*,* and the *Commentary on Auenbrugger*, are celebrated testimonies of the manner and genius of M. Corvisart. In the first, the inflammations of the pericardium, the dropsies which fill its cavity, the thickening and attenuation of the walls either of the heart in general, or of each of its cavities, the hardening of its tissue, its ossification, its conversion into fat, the contraction of its orifices, its tumours, its inflammations, and its ruptures, are presented, together with their melancholy symptoms, and their fatal results, with an order and clearness that nothing in medicine can surpass. This book so occupied the minds of the young physicians who were eager for instruction, and their imagination was so powerfully struck by it, that, for some time, it is said, they saw nothing but diseases of the heart, as at other times, they have seen every where gravel, bile, asthma, or inflammations. The effect which it would have on the sick would be still more cruel. His epigraph itself, *Hæret lateri lethalis arundo*, tells how disheartening the reading of it is; but medical books are not made for those who are not physicians; and it is well that those who are so, should know positively when nothing remains for them to do. This unhappy certainty prevents them at least from tormenting their patients with useless remedies.

In the *Commentary on Auenbrugger*, it is the diseases of the chest, the fluids which fill its cavity, the tumours which obstruct the bronchia, or the cellules of the lungs, that he teaches us to distinguish, by the different sounds which the walls of that cavity emit when struck. The form given to this work ought to be remarked as the proof of a noble generosity. In it M. Corvisart sacrificed his fame, a kind of property of which men are less disposed to be lavish than of any other, to a delicate feeling of justice towards an unknown individual, and one who had been long dead. He had already, from the suggestions of his own mind, made most of the experiments contained in this commentary, and had intended to collect them in a single work, when there fell into his hands a dissertation, published in 1763, by a physician of Vienna, translated in 1770 by a French physician, and yet almost entirely forgotten, in which he found part of what he had observed. *I could have sacrificed Auenbrugger's name*, says he, *to my own vanity*,

but I did not choose to do so: it is his beautiful and legitimate discovery that I wish to revive.

These words of themselves describe a character. No one, in fact, was more free, more open, more unassuming; nor could any person be less occupied with himself. Placed so near the man whose word was all-powerful, and at the time when so many prerogatives were brought back by little and little, which were of advantage only to those who were decorated with them, how easily could he have obtained for himself the restoration of the ancient privileges conceded to first physicians, so lucrative, but so useless, it may even be said so hurtful, sometimes to the real progress of medicine.

But he was sensible that at the height which the sciences had reached, the exclusive influence of one individual, were he the most skillful in his profession, could only restrain their flight. So far was he from wishing to gain any pre-eminence, that he did not take a higher rank in his hospital than was due to him in point of seniority. On the other hand, contrary to the example of those zealous persons who think they shine so much the more when they are surrounded only by obscure individuals, he appointed to the different situations in the medical house the physicians who enjoyed most reputation in the city. There were in the number some who had written and spoken against him; for even this was not to him a motive of hesitation. Those whose memory alone remained to be honoured, the Bichats and the Dessaults, obtained, at his solicitation, monuments, the only mark which he wished to leave of the favour which he enjoyed. I forget, he has given another,—in founding at his own expense, in the Faculty, prizes for the young persons who distinguish themselves by good clinical observations. It has been remarked that many men, on attaining distinction, have remembered the obstacles which poverty opposed to them in their early years, and by a very natural feeling have sought to render less difficult the progress of some of their successors. M. Corvisart was led to this the more willingly, that to his enthusiasm for his profession, he joined a true friendship for those who were possessed of the same feeling. He was jealous of none of his fellow practitioners, and always did them whatever services lay in his power. His greatest pleasure was to see himself surrounded by young physicians who exhibited talent, and it was not with his advice, and with his lectures alone, that he encouraged them; he made them partake the enjoyments of his fortune, and the diversions which a secret inclination to melancholy appear to have rendered necessary to him. It is said, that, when he had performed the duties of his profession, if he did not give himself up to the amusements of gay and enlivening society, he fell into depression of spirits, and painful melancholy; that in him the active and busy physician of the morning, became in the evening a man of pleasure, who would not permit either his art or his patients to be spoken of,—a disposition unfortunately too common among men of ardent genius, and which greatly diminished the services which

* *Essay on the Diseases and Organic Lesions of the Heart and Large Vessels*, extracted from the *Clinical Lectures of M. Corvisart*, and published under his inspection by M. E. Horeau. 1 vol. 8vo. Paris, 1806, 2d edition.

M. Corvisart might have rendered to science. Without hurting his zeal for teaching, which identified itself with his passion for his art, it made him a rather negligent academician, and an unproductive author. After having keenly desired to be admitted among us, he scarcely ever assisted at our meetings. His treatise on the diseases of the heart, although his own in the ideas and in all that forms the essence of a work, did not come from his pen, but was drawn up by one of his pupils, M. Horeau; and if it may be regretted that any one should require such diversions, he was a fortunate man, who, amid all his amusements, was capable of leaving such a monument.

It is asked, and the question naturally suggests itself with respect to many others, if, on the frequent occasions when professional duty brought him near a man whose power was unlimited,* he had not some opportunities of giving him advice that might have been useful to himself, and have perhaps spared some of the blood of Europe? It is certain that he did not allow himself to sink so much as many personages who appeared externally in a higher position, and that whenever, for example, the master showed a disposition to banter him on his profession, a smart reply quickly checked the attempt; but it is also certain, that he never conversed about any thing of general interest. On matters of indifference, every familiarity was allowed him; but a cold look, or a harsh word, stopped him the moment he tried to break this circle. He himself related, that, at the period of a birth, which, coming especially from such a marriage, seemed calculated to satisfy the most ambitious hopes, he permitted himself to ask if any thing more could be desired. *Toujours Champenois Docteur!* was the only reply he received, and the speaker turned his back.

M. Corvisart had applied on himself his inexorable talent of foresight, and had obtained from it but a very melancholy augury. His conformation, and the instance of his father, had given him a presentiment of the apoplexy which threatened him, and which did not fail to come on nearly at the time that he had foretold it. This cruel disease at first only affected his motions; his judgment remained sound, and the first use which he made of it was to renounce all exercise of his art, and give himself up entirely to repose. But this precaution delayed only for a very short time an attack which proved fatal. He died on the 18th September, 1821, leaving no family.

His place in the Academy of Sciences has been filled up by M. Magendie, and his chair in the College of France had for several years been occupied by M. Hallé.

From the Westminster Review.

FOREST SCENES AND INCIDENTS IN THE WILDS OF NORTH AMERICA; being a Diary of a Winter's Route from Halifax to the Canadas, and during four months residence in the Woods on the Borders of

* Bonaparte.

Lakes Huron and Simcoe. By George Head, Esq. London. Murray. 1829.

Why is the Adventures of Robinson Crusoe, the Mariner of York, the most delightful and interesting of books? In what does the pleasure of the reader consist; whence is it derived? How is it that the various members of the busy world, high and low, young and old, feel so intense a sympathy in the fortunes of the shipwrecked sailor in his utter solitude? It cannot be said that it is the spirit of adventure which enchains the attention of the anxious reader, for adventure chiefly ceases with his shipwreck when the true interest of the story commences: it is when he is alone that our imagination is with him: in his cave, in the chase of his goats, in his primitive contrivances of necessary utensils, in his solitary visits to the wreck, in his wanderings on the shore. His register of simple notch and pole, though it only reckons the days of a poor mariner's sojourn in a desert island "placed far amid the melancholy main," is reflected upon with even a more lively interest than that other Register termed Annual, of paper and print, which in this country records all the great yearly transactions of the entire world. Such is the intensity of individual sympathy.

There are few things more flattering to mankind than to be shown by a practical example the fertility of human resources: it is a noble spectacle for us to watch an individual turning all nature to his uses, forcing her bounties where she does not yield them spontaneously, and by the arts of civilization, diverting them into the channels best adapted to administer to his wants: the struggle is noble, and no small source of the interest we take in such narratives as those of Robinson Crusoe. There is moreover a pleasing perplexity in suddenly discovering the extent of our dependence in a state of civilization upon persons and objects to whose aid we have been so long habituated, that we absolutely forget the necessity of their mediation. When we behold a being accidentally placed out of the reach of all civilized subsidia: seeking his fire in the recesses of nature, moulding his own pottery; and stripping his clothing from the beasts of the field, we are excited to a sudden and lively impression of the advantages by which we are surrounded: our porcelain, our plate, and our stores of shining steel, our well-compacted dress, and all the accessories of civilized life assume a distinct existence. A pair of gloves becomes a chapter of thought, and we become alive to all the complicated machinery of artificial life. These are some of the pleasures derived from the perusal of such works, and thus they are combined with all the hopes and fears which spring from the common source of sympathy with one who is placed in circumstances of extreme trial.

We have been led to talk of Robinson Crusoe by the narrative of Mr. Head, who is a sort of Robinson Crusoe in his way. He was neither shipwrecked or wholly excluded from society, but in his residence among the back woods of Canada he was placed very nearly in a state of complete solitude, and sufficiently thrown upon his own resources to give us an interest in the perusal of his adventures. The

scene of his temporary banishment from society was not laid in any paradisaical island of the South Seas, but still in a country which has high claims upon the lover of the picturesque; a country of rude and gigantic features, of hard but invigorating climate, and abounding in difficulties which task the ingenuity and the courage of the occupant. Mr. Head is equal not only to live among the cold Canadian hills, but he is equal to the description of them; we have perused his work with considerable pleasure and shall contrive to inform our readers what they may expect from it.

Mr. Head, with some objects in view which he does not explain, disembarked at Halifax, the capital of Nova Scotia, after a rough passage from Falmouth, in the month of November: the St. Lawrence was already closed for the winter; consequently our voyager had to make his way to the Canadas over land, an enterprise of some difficulty and hardship. A journey in this country, in winter, is only practicable after the snow has fallen in quantities sufficient to bear the sleigh; and as the snow had not yet come down, Mr. Head was delayed in Halifax until the roads were in order for travelling. The moment of the descent of the snow is the signal of gaiety in Halifax. The sleigh is put in immediate requisition, the fur cloaks are assumed, and all the world is in motion for business or pleasure: the fall of the snow is a manner of breaking the ice in Nova Scotia. Merchandise of all descriptions begins to arrive, and not the least singular in appearance are the waggon-loads of frozen pigs. These "are exposed for sale, quite hard and stiff, and in a fit state to keep till the spring. They had an unusually uncouth appearance; for their mouths were generally open, and the last services seemed never to have been properly paid to the defunct. Their limbs were not arranged with decent regularity, and they appeared to have given up the ghost in the act of squalling and at full gallop. Some were placed standing at the doors in the streets like rocking-horses before a toy-shop, upon their four legs, as if they had been alive. This mode of keeping a pig for a winter without giving him a grain of any thing to eat, or being subject to his noisy unmannerly conduct—nay, to be enabled to eat him piecemeal is indisputably one advantage of a cold climate. But frozen meat, on the other hand, disappoints the epicure, being always tasteless and bad."

Dr. Granville, in his description of St. Petersburg, tells us of markets piled with frozen provisions, and of housekeepers who store their winter's provision in cellars as we do coals; he, however, if we remember right, differs from Mr. Head in his estimation of frozen viands. In all probability the Russians understand the art of thawing better than the North Americans, and it may be owing to this that the latter find their provisions "tasteless and bad."

On the 8th December, Mr. Head left Halifax in a sleigh which he had engaged to take him to Annapolis, a distance of one hundred and thirty-two miles, for which he was to pay £90, a tolerable proof of the difficulty of the roads. The Canadians and the other Colonists in that quarter seem to share the identical

manners of the Yankees themselves; not only as we have them painted in the elaborate pages of Captain Basil Hall, but even as Mat thews himself has sketched them before the admiring audiences of our countrymen. The reception Mr. Head met with at the different inns on his route is truly American. "The people," says he of an inn on the road to Annapolis, "were not at all uncivil; they allowed me to shake the snow off my clothes in the passage, and proceed unmolested as far as the parlour, but nobody seemed at all inclined to stir, till, in answer to my repeated entreaties, "Mother," said the great girl of the house, in a fretful tone, "Mother, don't you hear how the man is calling for something to eat: and then the mother did begin to move herself, and presently a heavy pile of toast and butter was placed before me, together with tea and beef-steaks." The fact is, that the landlords of the inns are mostly holders of land, and independent of the profits arising from their hostelry; they are moreover thinly scattered, and, consequently, the Boniface of Canada, as well as of many parts of the United States, considers that the obligation between the traveller and himself is mutual; and the balance considerably in his own favour. Some official importance is also generally assumed, for it very frequently happens, that the publican is a captain or colonel of the Militia.

From Annapolis Mr. Head made his way to Digby, where he was to embark in order to cross the dangerous bay of Fundy to the town of St. John's. After which town, the next point on the route to Quebec is Fredericton, a distance of eighty-one miles; upon the ice of the frozen river of St. John's. The season was, however, not sufficiently advanced to render the entire passage by the river practicable: it was therefore only resorted to by the driver of the sleigh occasionally, when he deemed it sufficiently frozen. The ice-route on these and other rivers of Canada is never entitled to be called safe: the confined air bursting from underneath, leaves chasms which becoming slightly skimmed over with new ice incapable of bearing the weight of a vehicle, and this will occur whatever may be the general thickness of the ice, or however great the intensity of the frost. The depth of the snow-drifts also opposes some obstacles to the traveller, but when the ice happens to be sound, and the snow to have been driven away, this mode of getting on has its charms. At one spot, "the wind," says Mr. Head, "had cleared away the snow, and the ice was nearly bare. The driver rattled his horses on at a brisk gallop, till they, by degrees, settled down into their fastest trot. The sound of the runners upon the ice, and of the horses feet, together with the perfect indifference with which the driver treated repeated loud cracks, which were distinctly audible, was to me altogether new. Still the motion was new, and the labour of the horses light, that there was very much to be pleased with, so finding that he whose business it was to judge of the soundness of the ice appeared to be satisfied, I very soon left off thinking about it." In one spot, however, the ice gave way; fortunately only the horses dropped through the hole, and they

were at length extricated by the united efforts of the driver and Mr. Head. They were proceeding so fast, and the shock was so sudden, that Mr. Head was flung a long way clear of the water.

At Fredericton the pains of travelling are relieved by a ball, into the pleasures of which Mr. Head entered with all his heart. These things appear to be pretty nearly conducted on the plan of the old country, except that the severity of the climate without, perhaps, encourages a still greater *rapprochement* within, and disposes all to enjoy the pleasures of society with a more cheerful warmth than with us. The jingling of the bells of the sleighs at the doors, and the general donning and doffing of fur, and, on the part of the ladies, of snow-boots, in the ball-room, were features which appear chiefly to distinguish a Canadian ball from an English dance in the country. "Heaps of these snow-boots," says our author, "were distributed by the person who had them in charge to their fair owners, who all at once within a very small space began to put them on. All these snow-boots required fastening, and to fasten them it was indispensable to stoop: some had chairs, but most had not; so that the variety of attitudes in which the female figure was on that occasion displayed, I shall not readily forget—much less the dilemma in which I found myself when standing in the midst of, and surrounded by so many fine forms, I was unable to stir an inch to the right or the left, backwards or forwards without the imminent risk of disturbing their equilibrium. But they equipped themselves with great rapidity, and laden with shawls, plaids, and cashes, sleigh after sleigh received its burden, and away they went with bells jingling, and the white smoke from the horses' nostrils shining in the lamps of the carriages that remained."

At Fredericton Mr. Head was obliged to make his preparations for a formidable journey on foot, over the snow lying in drifts on the bed of the river St. John; for although he had still eighty three miles sleigh carriage to go as far as Presque Isle, yet Fredericton was the last place of sufficient importance to afford him the necessary supply of snow-shoes, toboggans, and buffalo skins. After the purchase of which, he sets out for Presque Isle. At an inn, or rather reception-house on the road, Mr. Head meets with entertainment which he describes with much humour: the scene in the following passage of domestic infelicity would be worthy of Hogarth, if the dash of caricature in it did not bring it down to the manner of George Cruikshank.

"The house we were now in for the night was very particularly dirty and comfortless. There were two beds in the room, one for the host, his wife, and four children, (the youngest of which was not more than a few weeks old,) and the other was appropriated to me. The driver and my servant lay on the boards before the stove, which was a Canada one, and too powerful for the size of the room. The heat all night was quite suffocating, though the weather certainly was not warmer than 20° of Fahrenheit. The bed I slept in had green stuff curtains, full of dust; and the

sheets were of some soft spongy material, which, if clean, at least felt otherwise, and for the first time since I had been in the country, I was tormented with fleas. It was impossible to get a wink of sleep; for, besides my own grievances, there were other causes of disturbance. The child cried incessantly in spite of all the woman could do to pacify it. It had, I believe, nothing at all the matter with it, but seemed, from sheer frowardness, to imagine that the little world of our miserable apartment was made for itself. Sometimes the good wife sat up in her bed with the little animal hugged up between her chin and her elbows, hushing and rocking herself and it; then she patted its back, and still it cried. Then ten times (I dare say) in the course of the night, out of bed got the poor husband, and stood for several minutes at the stove, with a pair of lean bare legs, and an extremely short shirt, stirring something in a saucepan with the broken stump of an iron spoon. A picture of obedience and misery! Then he got into bed again. Then came a long consultation, and almost a quarrel, about what was best to be done. Then the grand specific was administered, but all without effect. At last the other children awoke, and the youngest of these began to cry too: and the mother said it was the big one's fault, and beat her. So off she went, and we had a loud concert, till, what with the noise of the children, and the heat, and the dirt, and the fleas, I felt ready to rush out of doors and roll myself in the snow. But every thing must have an end, and so at last the children became all tired out, and by degrees grew quiet; and in the morning I found I had been asleep, and got out of bed determined to be off as soon as I possibly could."—p. 78—80.

The method of travelling in these parts is not at least without its apparent danger. Mr. Head met with an able driver, and they passed over their difficulties in a style worthy of the four-in-hand club: we question whether any members of that now obsolete society ever took a drag down and up a hill in better style than Mr. Head's charioteer.

"Occasionally, during this stage, we encountered some little ravines, or precipitous gullies, which crossed the road, and which formed small creeks or outlets of the river. There were several of these which it was necessary to pass, and at the bottom of each was a rude wooden bridge without side-rails, and scarcely broad enough to permit three horses to pass abreast; notwithstanding which, we went over with our pair always at full gallop: much to my annoyance at first, till I found that the cattle possessed quite as much sense as their driver, and sufficiently understood what they were about. The ravines were so steep, that in order to ascend one side, it was absolutely necessary to rush down the other to gain an impetus; and the distance from the top to the bottom was about one hundred and fifty yards. The bridges were composed of pine logs laid loosely together, which made a rattling and a clatter as the horses' feet came upon them. The Frenchman drove with long cord reins, without any contrivance to prevent them falling down the horses' sides, and the rest of the tackling was of an equally simple fashion. The

cattle were indeed but barely attached to the vehicle; a matter of little importance during the former part of the journey, but now deserving a little more consideration: for the horses, so sure as they arrived at the verge of each ravine, seemed to take all sort of charge upon themselves, while the driver, yielding to circumstances, sat still upon his seat. Up went their heads and tails, and, like a pair of hippogriffs, down they went with a dash till they reached the bridge, when, closing together, laying back their ears, and cringing in their backs, they rattled over the logs at full gallop, and up the opposite bank, till the weight of the vehicle brought them to a walk. Now came the turn of the driver; and as he was perfect in all the words which frighten horses, he used them with such emphasis, jumping out of the sleigh at the same time with considerable activity, while the animals dragged it through the deep snow, that he contrived to keep them to their collar till they had completed the ascent."

—p. 81—83.

The houses of the settlers on the line of road in a country so thinly inhabited as this part of North America, scarcely belong so much to the inhabitants as the travellers. They are entered without ceremony: a salutation is scarcely considered necessary: the voyager enters, comes in after him his log of wood, and after he has thrown it on the fire, he takes down the key of the stable from its nail as if it were his own. The landlord may go to bed at night with an empty house, and in the morning find the hearth of his log-fire strewn with sturdy strangers, who have dropped in at all hours of the night. "It is a question," says Mr. Head, "which is best off, the penniless guest or the host himself, who cannot, in his own house, walk across his bed-room at nine o'clock at night, without the risk of disturbing some great fellow stretched out and snoring before his fire, and who, if he happen to be trod upon, will swear as loudly as if the whole house belonged to him."

On entering a house in Canada, the stranger stands a moment on the threshold to shake off the loose snow from his feet. This operation is performed by striking the hinder part of the calf of each leg with the great toe of the opposite foot very rapidly—this is as common in Canada as making use of a mat in England, and becomes so much a habit, that the Indians never enter a room even in summer without going through the ceremony. From such origins arise national practices, which often outlive their occasion and necessity.

At Presque Isle Mr. Head was entertained at the house of a Mr. Turner, on whom he has exercised his talent for sketching; the portrait is curious: in these remote and thinly inhabited countries, if a man has not active duties to perform, in the absence of all claims of society and all motives of excitement he sinks into a state of absolute torpor.

"My host was, I believe, an American,—a tall, withered, thin man, about sixty years of age, with extremely small legs and thighs, narrow shoulders, long back, and as straight as a ramrod. Innumerable short narrow wrinkles, which crossed each other in every direction, covered his face, which was all the same

colour—as brown as a nut; and he had a very small mouth, which was drawn in and pursed up at the corners. His eyes were very little, black, keen, and deep set in his head. He hardly ever spoke; and I do not think, that while I was in his house I ever saw him smile. He was dressed in an old rusty black coat and trousers, both perfectly threadbare, and glazed about the collar, cuffs, and knees, with grease; and he sat always in one posture and in one place,—bolt upright on a hard wooden chair. He seemed to me the picture of a man who, from want of interest in the world, had fallen into a state of apathy;—and yet that would seem impossible, considering that Mr. Turner was the chief diplomatist in these parts,—the representative of the commissariat department, charged with the duties of supplying the garrison at Presque Isle,—a man of high importance in his station, invested with local authority, and in direct communication and correspondence with the higher powers at Quebec. Notwithstanding all this, the energies of Mr. Turner's body and mind were suffered to lie at rest; for the garrison consisted of a corporal and four privates, making in all five men, to supply them with rations was nearly his whole and sole occupation; and so he had gradually sobered down into the quiet tranquil sort of person I found him. A daughter, a fine, handsome, bouncing girl, under twenty, with sparkling black eyes and an animated countenance, seemed to bear testimony to days gone by, when affairs were somewhat more lively; but the contrast now was sufficiently striking; for without regarding her, any body, or any thing, he kept his place and attitude, sitting always close to the stove.

"There was a small square hole in the centre of the door (as there generally is in all Canada stoves), made to open and shut with a slider as occasion requires: this he kept open for a purpose of his own; for by long practice he had acquired a knack of spitting through this little hole with such unerring certainty, by a particular sort of jerk through his front teeth, that he absolutely never missed his mark. This accomplishment was the more useful to him, as he was in the habit of profusely chewing tobacco,—all the care he seemed to have!—and he opened the door of the stove now and then, to see how the fire was going on."—pp. 98—101.

From this point the pedestrian part of the voyage commenced, the most fatiguing and painful part of which was the necessity of carrying on the feet the clumsy snow-shoes. This snow-shoe is a light wooden frame of an oval shape, about forty inches long and eighteen in extreme breadth, and its weight about two pounds. The whole surface within is formed of a net-work of thong, like that of a racket, but rather stouter. A small square aperture about the size of a man's hand is left in the net-work, into which the toes sink at every step, by which means the foot is prevented from slipping back, and a purchase is giving to step from, while the snow-show, forming an artificial platform, remains still in the ground. The foot is in no way confined to the machine, except by the toes, by which it is lifted or rather dragged along at each step. Such is Mr.

Head's description of the shoe which to him proved an instrument of torture. The weight and the strain upon the ankle cause to those unaccustomed to the use of it, a severely painful malady, which is called the *mal à raquette*.

On this route Mr. Head travelled in company with the Canadians who had charge of the post letters, and who acted as his guides: they were joined by the accidental travellers and settlers pursuing the same road. One of these settlers entered into conversation with Mr. Head. The relations of this man lived in the town of Ayr in Scotland, and he complained that all intercourse had ceased between him and them owing to the miscarriage of his letters. Mr. Head agreed to take charge of one for him. The description of the poor man's difficulties in inditing an epistle in these wild regions is amusing, and may serve to show the inconsistency of letters and hand-labour, in a scarcely settled country, and console the friends of emigrants for an apparent negligence. The letter was accomplished in a log-house where the travellers spent the evening in smoking, and the night in sleeping. The writer seated himself on the ground in a corner of the room; his desk was a plate supported on his knees; his paper was as bad as well could be; his ink newly thawed and quite pale; his pen, pulled out of a wild goose's tail, was oily; his own hand was as hard as the bark of a tree, and his broad black thumb had been smashed by the blow of a hammer or an axe, and had no sort of bend in it. Nevertheless he produced a folded epistle, and Mr. Head subsequently delivered it to its address.

On one occasion it blew a violent snow-storm, and no exertions of the party could enable them to reach their appointed resting-place. The consequence was, that they were obliged to spend a polar night under the inclement air, which makes a citizen in snug quarters tremble with horror and apprehension. The narrative of this night's efforts forms an encouraging picture of the resources of human power. It begins thus—

"But, in spite of every obstacle, the strength of the two Canadians was astonishing; with bodies bent forward, and leaning on their collar, on they marched, drawing the toboggans after them, with a firm, indefatigable step; and we had all walked a little more than seven hours, when the snow-storm had increased to such a pitch of violence, that it seemed impossible for any human creature to withstand it; it bid defiance even to their most extraordinary exertions. The wind now blew a hurricane. We were unable to see each other at a greater distance than ten yards, and the drift gave an appearance to the surface of snow we were passing over, like that of an agitated sea. Wheeled round every now and then by the wind, we were enveloped in clouds so dense, that a strong sense of suffocation was absolutely produced. We all halted: the Canadians admitted that farther progress was impossible; but the friendly shelter of the forest was at hand, and the pines waved their dark branches in token of an asylum.—We turned our shoulders to the blast, and comfortless and weather-beaten, sought our refuge. The scene, though changed, was still not without interest;

the frequent crashes of falling trees, and the cracking of their vast limbs as they rocked and writhed in the tempest, created awful and impressive sounds; but it was no time to be idle: warmth and shelter were objects connected with life itself, and the Canadians immediately commenced the vigorous application of their resources. By means of their small light axes, a good sized maple tree was in a very few minutes levelled with the earth, and in the mean time we cleared of snow a square spot of ground, with large pieces of bark ripped from the falling trees. The fibrous bark of the white cedar, previously rubbed to powder between the hands, was ignited, and blowing upon this a flame was produced. This being fed, first by the silky peelings of the birch bark, and then by the bark itself, the oily and bituminous matter burst forth into full action, and a splendid fire raised its flames and smoke amidst a pile of huge logs, to which one and all of us were constantly and eagerly contributing.

"Having raised a covering of spruce boughs above our heads, to serve as a partial defence from the snow, which was still falling in great abundance, we sat down, turning our feet to the fire, making the most of what was, under circumstances, a source of real consolation. We enjoyed absolute rest! One side of our square was bounded by a huge tree, which lay stretched across it. Against this our fire was made; and on the opposite side, towards which I had turned my back, another very large one was growing, and into this latter, being old and decayed, I had by degrees worked my way, and it formed an admirable shelter. The snow was banked up on all sides nearly five feet high, like a white wall; and it resolutely maintained its position, not an atom yielding to the fierce crackling fire which blazed up close against it.

"The Canadians were soon busily employed cooking broth in a saucepan, for they had provided themselves much better with provisions than I had. I had relied upon being able to put up with the fare I might meet with, not taking into consideration the want of traffic, and distance from the civilized parts of the province; owing to which, the scanty provision of the inhabitants could not allow them to minister to the wants of others, although they might be provided with a sufficiency for themselves. And I now saw the guides pulling fresh meat out of the soup with their fingers, and sharing it liberally with my servant, whom they had admitted into their mess. The poor fellows seeing that I had nothing but a piece of salted pork, which I had toasted at the fire on a stick, offered me a share of their supper, but this I felt myself bound to decline. My servant had fewer scruples, and consequently fared better. In return for their intentions I gave them a good allowance of whiskey, which added to their comfort and increased their mirth. One by one they lighted their tobacco pipes, and continued to smoke; till, dropping off by degrees, the whole party at last lay stretched out snoring before me."

We cannot go on with this extract; but have quoted enough to show that even in the depths of a North American forest, buried in snow, and deprived of every ordinary succedaneum of ci-

vilized life, a man needs only to be bold and persevering. At the time when our traveller arrived at the St. Lawrence, that mighty river was not fixed by the frost. Its rapid torrent was carrying down immense masses of ice, and was frozen over for a considerable distance from each bank. The traverse was a service of danger, and indeed only practicable to the hardy and active Canadian. It was effected, and a few days after the river was attacked by a frost, and passable to all the world. The act of fixing the river is the affair of but a few seconds. The moment a general jam takes place, as it is called by Mr. Head, the frost has time to do its business; the whole of the different masses are connected together by the frozen surface, and the rapid current rushing up between the different masses is quickly frozen, and serves as cement to fix the whole in one compact mass of ice. A road is then cut by means of axe and hatchet, the avenue is quickly filled with vehicles and passengers, merchandise passes from one side to the other, and all the world begins to perceive the value of a road. They call it a "Pont."

After passing Quebec, Montreal, and Kingston, which towns our traveller scarcely condescends to notice, on the ground of their being well known, or perhaps because they are not altogether in the desert, he proceeds to York, and thence to the bay of Pentagushene, an outlet of Lake Huron, where it was the object of the government to establish a naval and military magazine. In this work, it seems Mr. Head was employed, but in what department precisely we have not ascertained. It at any rate led him to a wild residence in the woods, to which part of the narrative we have at length arrived. We shall give his own account of his first introduction to forest companions:

"On entering the wood, I ascended a steep acclivity, which I had no sooner surmounted, than I found myself amongst a parcel of small huts, made up of a few poles thatched over with spruce boughs, scattered here and there; and from two or three of these it was that the smoke issued. There was not such a thing as a log house to be seen; but I observed that one of the huts was rather better finished than the rest, and a farther distinction was allotted to it by a flag, which was placed upon the roof. It was evident, that none of them could have been long erected, the snow was so excessively deep, and the foot-marks so few; however, I made my way immediately towards the one with a flag, where I found Captain C—, of the navy; and I had no sooner entered and introduced myself, than I received a very cordial welcome. Captain C— immediately afforded me the assistance of a couple of men to build me a hut; and, as it was necessary that it should be ready for me to sleep in the same night, I went back to the place where I had left my servant with the baggage. I told him where I would have the hut built; and, leaving him to superintend the works and remove the things, I returned to Captain C—, where I was regaled with a fine piece of boiled beef, which I was hungry enough to think excellent, though from its toughness it would hardly remain upon the fork. Captain P—

and Lieutenant E—, the other officers appointed to the establishment, had assembled at the commodore's hut, and with them I remained till nearly seven o'clock, when I left the party to attend to my own affairs.

"I had directed my hut to be erected on the summit of the brow which rose close from the bay; and when I returned to the spot I found my servant busily arranging my different articles of property in an edifice which, if not equal in splendour to the renowned palace of Aladdin, had been, at least, completed nearly in as little time. By the help of a few poles and cedar boughs, I had now, such as it was, a house of my own. There were at least two sides with a back part, and the front was open; but a brilliant fire was blazing before it, big enough for the kitchen of the London tavern, and in itself a world of comfort. The plan of the hut was not of my own contriving; it was such as local experience had determined upon, and of the following description: the front, where the fire was burning, was six feet high and eight feet broad; but the roof dipped towards the extreme end, which was only four feet high, and the length was exactly ten feet. The snow had been well cleared away from the bottom, and, being banked up, it helped to support the poles which formed the framework. A bundle of spruce boughs laid across the extreme end, with a sack of potatoes for my pillow, formed my bed; and if I had no door opposite, all the cold that got in necessarily passed through the fire and smoke. My baggage,—that is, a very small valise, a gun case, and some other little packages,—was easily disposed of within these narrow limits, and every thing was perfectly ready for my repose soon after it was dark. My servant I had got attached to the shipwright's mess,—a noisy set of fellows, crammed altogether within a very small compass, and among them there were some singers, the sound of whose voices I used frequently to hear at night as I sat by myself."

—pp. 187—190.

The next morning the new settler provided himself with an axe, and sallied forth to cut down trees, for the wood of which he had various uses. The first article of furniture he manufactured was a bedstead; he then contrived a kind of bed of spruce boughs, having previously lashed his poles together with a kind of ticking, composed of the bark of the bass-tree, an article which, in those parts, supplies the place of rope and string. Before he had advanced far in his work, he was reinforced by a gang of Canadian axe-men* from York, who arrived to be placed at his disposal. The party immediately set about the construction of log-buildings for the reception of government stores, and huts for their own covering.

The building of Mr. Head's own house was the first operation; he chose the brow of a hill for its site, close above the bay, projecting to chop down, one by one, all the trees which impeded his prospects. A person desirous of trying the value of the different systems of forest scenery, and settling the questions mooted between Sir Walter Scott and Mr. Withers, could not hit upon a better scheme than that of settling amid the woods of Canada, and direct-

ing the operations of a few gangs of true Canadian woodmen. The dexterity of these men is extraordinary. To the Canadian labourer, says Mr. Head, accustomed to the use from his childhood, the felling of a tree is the act of a few minutes. He can drop it which ever way he pleases, divesting it of its limbs, and adapting it for its place in the wall of the buildings with equal dexterity. Standing upon the falling tree, and with his foot placed in such a position as would appear liable to be split to the instep at every blow, he strikes directly under it boldly and carelessly, thus making a large notch (which enters, perhaps, half the thickness of the tree,) quite perpendicularly. We remember pointing out a fine tree in Hyde Park to a little fellow, the son of a naval officer, who had been long settled in Canada; his remark was, "I would drop it north in three minutes."

As Mr. Head's house was in progress, he made a grand discovery: he was working close to the water's edge, when behold, he turned up a large iron pot with three short legs; invaluable tripod, the uses of this utensil were manifold, nay, incalculable. The first application of it was to the purposes of an oven, and that same evening the iron pot presented its discoverer with a loaf of bread.

Since Mr. Head's arrival in the woods, the weather had been uncertain; the snow was slushy, and walking far impracticable without the aid of snow-shoes, of which he had a horror; but on the 6th of March the world assumed another aspect, the snow clothed in glass, and the bay was frozen. A new pleasure was opened to him, he put on his skates, and seemed to have found a new sense; he had got wings and had left the state of chrysalism. In the course of gratifying this new power, he meets with an adventure which he shall describe in his own words:

"The glow of exercise, the lively rattle of the skates, and the sensation produced by the fresh air, combined to embellish the novelty of the scene before me, as I ranged with unlimited freedom the clear ice which extended all across the bay. Every object around me was unexplored, while I had the means of being conveyed, as it were on wings, from one to the other. I had been confined for many weeks, either sitting still half frozen in a carriage the whole of the day, or, since my arrival in the forest, completely weather-bound. For a long period I had never been thoroughly warm, only barely able to subdue cold, and had seldom during the whole day felt a dry stocking on my foot. My blood was now in full circulation, and the interest I felt in every thing around me was so great, that the sun had nearly reached the tops of the trees before I thought of returning to my dwelling. I had looked almost into every corner of the bay, which was about seven miles long, and from two to three across, and was at last quite tired, when I discovered an object which attracted my attention.

"There was, at a distance on the ice, what appeared to be a mound of earth thrown up,—an appearance, under present circumstances, not to be readily accounted for; so I made towards it that I might see what it was. As I approached within a few hundred yards, I thought I

perceived it move a little, and, halting for a moment, I saw that that was really the case. It was of a light brown colour; but the figure was so indistinct, that while I watched it attentively I could not decide what it could possibly be. A bear would have been blacker, and I knew of no living creature of those regions answering its description. But, whatever it might be, there it was, and it was therefore necessary to be a little cautious, as I had no arms, in approaching it. I stood for some seconds thinking what I should do, and had almost determined to go home for my gun, when I saw the hide which caused all my speculation thrown suddenly aside to make way for the head and shoulders of an Indian, who protruded his rough matted locks into daylight from under it. This solved the problem in a moment, and I saw that the man had been employed in fishing, and had so completely enveloped himself in a large buffalo skin that no part of his body, head, feet, or hands, were to be discovered. He sat over a square hole cut in the ice, with a short spear ready to transfix any fish which might be attracted by his bait. The hole was about a foot square, and the bait was an artificial fish of white wood, with leaden eyes and tin fins, and about eight or nine inches long. The ice where he had cut it was about three feet thick.

"Being within a few yards of him, I commenced a parley by signs, for he did not appear to understand a word of English; but he seemed to wish me any where else, and to be much annoyed at having been interrupted in his occupation. As my object was to pacify him, I gave him a small ball of twine I had in my pocket, and with this he was highly gratified; much more so, however, by my skates, which he viewed with marks of great astonishment. He looked narrowly at the straps which bound them to my feet; but when I made him acquainted with their use, there were no bounds to his delight: at the same time he kept his own interest in view; for he tried to persuade me to give him a piece of a red shirt of flannel which I wore, to make a bait with. This I refused, by shaking my head and saying 'No, no!' rather loudly; but he kept on entreating, taking hold of a corner of the collar with his finger and thumb. I persisted in refusing, and kept him off. But he was not so easily answered, and offered me his knife, giving me to understand I might cut it from what part of the garment I pleased. So, shaking him by the hand and patting his shaggy locks, I skated away, leaving him to pursue his occupation for the rest of the evening."—*p.* 199—203.

The frost continued, and the hermit of the forest had leisure to make some observations on the extraordinary sounds which at extremely low degrees of temperature proceed from the frozen bosom of the lake. "I was," says he, "occasionally surprised by sounds produced by the wind, indescribably awful and grand. Whether the vast sheet of ice was made to vibrate and bellow like the copper, which generates the thunder of the stage, or whether the air rushing through its cracks and fissures produced the noise, I will not pretend to say: still less to describe the various

intonations which struck upon the ear. A dreary undulating sound wandered from point to point, perplexing the mind to imagine whence it came or whither it went; whether aerial or subterraneous: sometimes like low moaning and then swelling into a deep-toned note, as produced by some Eolian instrument: it being in fact and without metaphor, the voice of winds imprisoned on the bosom of the deep. This night I listened for the first time to what was then perfectly new to me, although I experienced its repetition on many subsequent occasions whenever the temperature fell very suddenly."

By the time that the log-house was finished, and Mr. Head was about to take possession of his castle, the establishment at Pentagushene Bay received an order of removal: the government had changed its intentions. The camp was consequently broken up, and the party took their departure for York, excepting Mr. Head and his Canadians, who were left in a desert station on Kempenfeldt. His solitude being now more complete than ever, he was still more entirely left to his own resources, and the uncertainty of how long it was intended that he should make his home on this spot, combined with the departure of his comrades, and the absence of every sort of comfort, depressed his spirits.

"The fire had been neglected in the bustle of departure, and had got low; remnants of packages and rubbish lay strewn about; my Canadians were at work at some distance in the woods; and there was nothing to disturb the loneliness and silence of the place. The building consisted of a single room of sixteen feet by twelve. The sides were rude logs laid one upon another, and calked in so insufficient a manner, that the light was visible in more places than I was able to count. The door, of thin deal, was too ill fitted to fill its frame, and the light which entered the apartment was through a small window of four panes of green inferior glass.—A gloomy feeling invariably envelops the mind, upon finding one's self suddenly deserted, as it were, and alone. Without stopping to think why, the very act of saying 'good bye,' and turning south while a friend or acquaintance walks away to the north, is always sufficient to produce this in a slight degree, and at the instant I felt inclined to depond. But a remedy, the best of all others, immediately suggested itself, and I seized my axe, to receive, by a couple of hours' hard work in the woods, the benefit of my prescription.—p. 217—18.

Recovering his spirits by means of a copious use of the axe, he resumed his ordinary life: contrived a rest for his gun, tried his hand upon another bedstead, chopped his own fire wood, and occupied his idle time in mending his habilitment. His gun constantly procured him fresh provision, and the kitchen and the toilette each consumed a small portion of his day. Sometimes he dined upon partridge; a woodpecker was good in a pudding; and, by way of variety, squirrels hotly peppered tasted as well as a rabbit. During these occupations he was unexpectedly joined by an ally, of whose services and faithful companionship he had no small reason to be grateful.

"March 20th.—Very early this morning I was awakened by a scratching at my door; and on listening attentively, I distinctly heard the feet of some animal which evidently had an intention of making its way into the house. It put its nose to the bottom of the door, sniffing and whining from eagerness, after the manner, as I thought, of a dog. Conceiving it might possibly be either a bear or a wolf, without stopping to put on my clothes I seized my gun, which was ready loaded over the fire, and keeping my eyes upon the door, which was of such very thin deal, and so imperfectly fastened by a wooden latch, that I could place no confidence whatever in its strength, I remained still a moment or two, not making up my mind exactly what to do. My window was fixed, and the glass so bad, that light would barely pass through it. As to distinguishing any object on the other side, that was quite impossible. There was many a hole in the house of which I might have availed myself, but it was scarcely daybreak, and therefore too dark to discern any thing without. So I threw a small log or two upon the fire to blaze up, thinking it best to remain where I was, even in case the creature should happen to break into the house, when I should be sure to have a fair shot at it. Scarcely a minute had now elapsed from the very beginning, when I concluded, from the sound, the perseverance, and total absence of fear of the animal, that it must be a dog and nothing else; so I opened the door very little and with extreme caution, and discovered, to my surprise and satisfaction, that I was right; for a dog it was; and in an instant, a brown, rough water-spaniel bounced into my room, overjoyed at having reached a human habitation. To account at once for the circumstance:—My house was but little removed out of the line of march of the Northwest traders; to one of which persons (as I afterwards discovered) the dog had belonged; and having lost his master, had wandered through the forest, till he came by chance to my dwelling.

"I greeted him with a most cordial welcome, happy to have a companion; an honest friend! whether from the clouds or elsewhere, no matter: so wishing his former master, whoever he might be, all sorts of prosperity, my only hope was, that he might never show his face in my neighbourhood; and I put a string round the neck of the dog. The poor fellow was, on his part, just as happy to see me as a dog could well be. He frisked and jumped, wagging his tail, and licking my hands, while his eloquent eyes, as plainly as letters engraved on brass, besought me to make trial of the merits of one so ready, on his part, to execute a bond of faithful allegiance. I showed him my gun, holding it down low to his nose; upon which he held his head back, while a glance of recognition ratified the treaty. Calling immediately for my servant, I got my breakfast; not forgetting my new guest. I had nothing for myself but bread and salt pork, which I shared with him. He ate voraciously, having been, apparently, a long time without food. I tried all the names of dogs, in order to see to which he answered best; and at last fancied that he attended most to that of Rover. So Rover,

at all events, I determined to call him."—pp. 227—230.

It may give a lively idea to the citizen of the wants of a settler in these parts, that Mr. Head from this log-house sent forty-seven miles and back across the frozen bay, covered with deep and slushy snow, and frequently penetrated with air holes, for a file to set a saw with. Liberté, the Canadian, employed on this expedition, brought back with him not only some files but a large piece of the flesh of a bear which some Indians had given him. It was a great lump of black looking meat, very like horse flesh, nevertheless a piece of fresh meat was a delicacy, and it was cooked for dinner. Ill cooked we apprehend: it tasted as if it had been kept in a hot pocket for some time; a fault neither to be attributed, in our opinion, to the bear, nor the bearer, but to the cook.

This Liberté was the only man in the neighbourhood who would have undertaken, or was likely to succeed in a similar journey. He was born for such exploits: he was in blood half a savage, in face a most curious combination of health and ugliness. His constitution was strong as that of a bear.

"Headless of cold, a known and tried pedestrian, his short, thick figure betokened incalculable strength, and his swarthy features showed a tinge too dark and fixed to be decomposed by common causes. He had suffered grievously from the small-pox, and he had but one eye, the other having been gouged out one or two years before by the thumb in a drunken squabble."—p. 28.

About the middle of April the weather suddenly changed, the scenery of the country assumed a totally different aspect, and all the winter pursuits of the dweller in the woods were succeeded by others appropriate to the fine season. The climate of Canada knows no intermediate seasons: they are neither prepared by autumn for winter nor for summer by spring, the appearance of things shifts like a stage scene, as if rather under the influence of a magician's wand, than by the slow and regular processes of nature. The effect of this change upon the whole creation is very pleasingly described by our author.

"I perceived in the morning all the ice broken in pieces, and floating towards the lake. It was moving slowly away, and a considerable extent of water was already uncovered. This was a joyful sight, for of all things a sheet of water conveys the most lively impressions to the mind, and confined as I was from the impassable state of the ice to the shores on one side of the bay, the barrier was no sooner removed than I felt a sensation of liberation, which seemed to be participated by the turbulent waves themselves, as, just risen from their bondage, they rallied as it were and held council together, bubbling and frothing in their eagerness to press on the rear of their retiring enemy. The wind chased the chilly field before it, which, split into mammoths, was every minute retiring farther from the sight, till about three o'clock in the afternoon, when the lively change was altogether perfect, and Kempenfeldt Bay, so long the type of dreary winter, became a lovely basin of pure water. And, as if to add to the gratifying occurrence,

the ice had no sooner disappeared, than the wind lulled, and the sun beamed forth to embellish the natural beauties of a spot in themselves very much above the common order. As the evening advanced, it was beautiful to see the enormous pines with which the banks were fringed, reflected in the water, while the winding shore presented a pleasing variety of sandy beach, and bluff, rocky head-land. Nor were the animal creation insensible to the moment: the large fish leaped incessantly high out of the water, and it was scarcely dark before a flock of wild fowl flew round and round in circles, lowering themselves by degrees, till each, one after another, dashed heavily into the favourite element. A sportsman can readily comprehend how animating it was to listen to the wild sounds which now broke upon the ear, as the feathered troop held their gabbling conversation together, and diving and splashing by turns, they commenced every now and then a short flight for the sake of a fresh launch upon the water. Every thing now was new; nature had thrown off her homely winter's garb, and was beginning to unveil her beauties. My enjoyments were from that day increased, and fish and fowl were added to my resources."—p. 257—259.

The fish were caught by spearing: an occupation which not only afforded food but sport. To be enabled to pursue it Mr. Head purchased a bark canoe of an Indian, a frail vessel which a child of twelve years of age can carry, but which will hold three men, and which, under the guidance of an experienced Indian, can follow the fish in all the deviousness of its rapid course. Sir Walter Scott has adorned one of his romances with a salmon-tickling; and all the world found it good: we have been interested in Mr. Head's fish-spearing and shall enable others to judge if there are not other pleasures than those of the salon and the boudoir.

"April 21st. The evening turned out remarkably fine, and the water was as smooth as a looking-glass. Every thing was ready for my fish-spearing expedition, the preparations for which were extremely simple. The fish-spear consisted of a straight handle about fifteen feet long, to which a couple of barbed iron spikes, of sufficient size to pierce a moderate-sized salmon, were affixed. The birch-bark, for the purpose of light, was prepared in pieces three or four double, each the size of a large quarto book; and one at a time of these was stuck in a cleft pole five or six feet long, placed at the head of the canoe, overhanging the water in such a manner that the blazing bark might shine upon it. It was no sooner dark than I went to the water's edge, where Liberté and another Canadian were ready with the canoe. As he held the vessel to the shore I steadied myself by his shoulder, stepped in cautiously, and took my seat in the middle. The canoe was a very egg-shell, and as cranky as a washing-tub, more fitted to carry ghosts than men, while Liberté was as ugly as Charon himself. A boy of twelve years old could have carried it, notwithstanding it was to hold three of us. We had an establishment of tinder and matches, and some pieces of fat pork cut into slips as a substitute for candles.

"As soon as we embarked, the men paddled away along shore towards the head of the bay; and as soon as we came near some small streams which set into the bay, we stopped, and the men, having struck a light, kindled the birch-bark in the cleft pole. Crackling like soft fat, the unctuous matter produced a clear flame, which lighted up the watery depth beneath us to the brightness of day. The soft ashes which fell occasionally from the fire caused a ripple, which for a moment confused the objects underneath, but otherwise at a depth of ten feet every thing was clear and resplendent. The slightest form was distinctly visible,—every pebble, even the beetle that crawled on the ground. We passed some perch lying close to the bottom, and soon afterwards a rapid quiver of the water announced the presence of some larger fish. Liberté now became animated, and pointing his spear in the proper direction, made signal to the man in the stern to give way. He struck once, twice, without success; but the third time brought a large fish up on his spear. It was a sucking carp; a worthless fish, full of bones, and very watery. However we pursued the remainder, and killed two more. We advanced nearer the head of the bay, and at the same time saw two other lights proceeding from the canoes of Indians who had visited the neighbourhood, and were pursuing the same occupation with ourselves.

"All of a sudden Liberté again sounded an alarm, and off we were again in pursuit of a fish, which I could not for a long time see: a fine salmon-trout, but of a nature infinitely wilder than the carp. We chased him like lightning, turning and doubling in his wake, till I was obliged to hold both sides of the canoe to keep myself from being thrown out into the water. However I caught sight of the fish every now and then, when he was for a moment still; then he made a dart, and all again was obscure. We were some minutes after him, having lost him, and come upon him again, but finally he eluded our pursuit, and made his way into deep water, till the glimmer of his silver sides was lost in the lurid yellow gleam that, becoming by rapid degrees more and more opaque, confined to its very narrow limits our subaqueous prospect. I changed places with Liberté, with some risk of being upset, and I took the spear, kneeling down in the head of the canoe. (We had regularly replenished our lights, which burnt out every five minutes or thereabouts.) We went back to where we left the carp, and found them again. I struck at them several times, but without success. I found it not only difficult to hit them, from the refraction of the water, but impossible, even had I judged the distance correctly, to drive the spear, by its long bending handle, straight forward. I saw some perch close to the bottom, and I speared one of them. We were in about ten feet water, and I found it was necessary to aim a foot at least below the object. I had the less difficulty, as they were not in motion. I also saw at the bottom a hideous looking fish, yellow with black spots, the body like that of a snake, with a large head, about a foot and a half long, and somewhat in form resembling the small fish

found under stones in running streams in England, and called the miller's thumb. I speared him, and found him so strong, that I verily expected he would have broken the handle of the spear.

"He was what the Canadians call a cat-fish. In his writhing he had a knack of twisting his supple body like an eel round the spear, and with a force that, considering his size, was quite surprising. He was, of course, not eatable."—p. 265—269.

When we read of the sturdy life of the forester, of its independence and its activity, of its healthy energy and its noble freedom from the chains of poverty, we cannot help exclaiming with Mr. Head, why do not the young and free seek a home among the untrodden wilds of bounteous nature. Why linger away a life of dubious existence in corrupt capitals, or in hungry villages: why suffer the pains of contempt and want and repulsed endeavours, when the woods invite the resolute occupant to peaceful labour and well-earned content: in the woods poverty is no evil: the settler has nothing to buy, nothing to pay; all he wants is to be had for the trouble of procuring it: the trees which afford him shelter, supply him with abundant fuel; the ground he disencumbers is his farm; far and wide extend his manorial rights: with a gun in his hand he seeks for food what others pursue for pleasure; the water supplies him with fish, and he is a bad manager if he does not soon surround his habitation with abundance. It requires a strong will to plunge out of society into the wide sea of the solitary wood; and it would be absurd to undervalue the advantages of society to those who stand well with it; but, for the man to whom it is a niggard of its goods, whom it suffers in its bosom rather than cherishes, for the stout arm that can hardly win its bread, and the stout heart almost broken by witnessing distress it cannot relieve, the terrors of the boundless forest must be small indeed. Listen to Mr. Head, who does not speak without experience: the privations of this species of life he was as likely to feel as another, and yet his memory is charged almost wholly with the advantages of such an existence in comparison at least with pauperism at home; and pauperism is not confined to the dependency of the parish.

"It seemed wonderful to think there should be so few among our poorer classes with energy enough to break the chains of poverty, and visit a land where pauperism is yet unknown; where youth and strength supply the catalogue of human wants, and where industry must meet its sure reward. The exuberant abundance of wood for fuel renders the fire side of the peasant, during the long evenings of winter, a solace equal to that of many a wealthier citizen of the world, and as his children, with united strength, drag each log to the hearth, he rejoices at the clearance of the encumbered earth, when those of the civilized world pay dearly for the enjoyment of warmth. An emulative feeling stimulates the natural industry of his constitution. The rattling clank of a neighbour's axe, the crashing fall of a heavy tree, seem to demand responsive exertion on his part, and give rise to an energy, which, even if the tinkling frosty air at his fingers' ends fails

to remind him that he has work on hand, quickly rouses within him the spirit of active labour. The work of his young children is of a value to him, far exceeding the expense of their maintenance, and he lives in the enjoyment of the consciousness of being able to leave them an inheritance of peace, if not of affluence. With facilities of water carriage, fish in abundance, and fuel, by the help of his gun, he may complete the necessities of life, and while the partridge and wild pigeon supply him with variety in food, he has also in store both recreation and amusement."—pp. 259—260.

It must be understood all along that our author speaks of the Canadas: other countries, as New South Wales, South Africa, may have their advantages—may have also greater countervailing evils. The apparent objection to the more northern parts of North America is the severity of the cold, which it is very possible may be so far from being a real objection, that it may contribute to the production of energy and the preservation of health.

Mr. Head was not permitted to remain long in his retreat: an order from his superiors drew him from the woods, and before the end of summer he was on his way to England to give the world a report of the pleasures and pains of a forest life. He concludes his volume with some remarks on emigration: without being profound, or embracing any wide extent of question, they are sensible and practical, and together with the remainder of the book of which we have endeavoured to give a faint idea, entitle him to the favour of the public. Mr. Head is not a scientific traveller; he makes no discoveries of any kind, but he is a lively and agreeable artist, who paints things as he sees them. We have heard that he is a brother of the Captain Head, of whose galloping course across the continent of South America we gave a favourable account in an early number. The brothers seem to resemble one another in straightforwardness of style and promptitude of manner. They write like athletic persons capable of contending with fatigue, and not afraid to encounter danger. Mr. George Head will now be as renowned for his exertions on foot, as Captain Head has been for his feats on horseback.

From the British Magazine.

THE PRODIGAL'S VOW.

BY MARY HOWITT.

OVER his spirit came a chilling blight,
Darkening the beauty of his manhood's
day,
And from his children's home, and from the
light
Of tried and trusting love he turned away.
To lands of old renown he went, to pay
His spirit's homage at each glorious
shrine;
And then in cities dwelt awhile, the prey
Of giddy folly, nightly proud to shine
At masks and revels wild, 'mid song, and
mirth, and wine.

And then in busy courts he played his part,
In the mad strife for rivalry and power,
Where man betrays his brother, and the
heart
Hot jealousies and cankering cares de-
vour:
Then went he to the field, and in the hour
Of the fierce battle, stood where thou-
sands fell:
Then, tired of war, passed to the forests hoar,
Bidding pride, pomp, and toiling man fare-
well,
A careless hunter free, among the woods to
dwell.

And years went on, and little thought had
he,
Dreaming his life like summer hours
away,
Until, as resting 'neath a forest tree,
In the deep beauty of an autumn day,
Back to his heart affection found its way.
What was it that his heart could thus un-
lock,
In the hushed forest where alone he lay,
Rousing him up as by a lightning-shock,
And calling forth his tears like waters from the
rock.

Was it some tone—some wild bird's carol
low
Loved 'mid the beauty of the years gone
by?
Was it a passing shadow that could throw
Back the wronged heart through wastes
of memory?
Some flower, whose fragrant scent or fairy
dye
Recalled each lovely and forgotten thing?
Or the still forest's solemn majesty,
Which deeply brooding round him, thus
could bring
His warm affections up from their immortal
spring?

Whate'er it was—beauty, or sound, or
shade,—
It was a spell with sudden power that
wrought,
And open to remorse his soul was laid,
Wrung by the might of agonizing thought;
Back to his heart all riven ties were
brought,—
Tears that had flowed unheeded—kind-
ness spurned,
And patient meekness that had murmured
not,
Till his frame shook, his aching temples
burned,
And towards all holy things his wakened spi-
rit yearned.

"O God!" he cried, and the still forest sent
Its silence to his soul,—“wherefore to me
Were given the beautiful—the innocent!
Why woman's love, which, even like the
sea,
Can not be fathomed—why the spirits free
Of happy children, as a blessed light
Within the dungeon of humanity—
Oh! wherefore were they given me, when
the blight
Of my cold heart did blast and darken their
delight?

My wife! the years are past that might have been
 All love, and faith, and sunshine—thou
 hast stood
 Alone, alone for years—I have not seen
 Thee in the glory of thy womanhood
 Amid thy children, thou serenely good!
 Their songs thou hear'st within thy place
 of sighs,
 Their merry feet pacing thy solitude—
 But all thy smiles are hollow mockeries,
 And secret tears make dim the lustre of thine
 eyes!

Hast thou in prayer remember'd me?—hast
 thou,
 Morning and night, knelt down in prayer
 for me—
 Sinful and abject wanderer, that did bow
 Myself for other worship!—Can it be,
 Oh God! that those pure prayers went up
 to thee?

I will arise, and to my children's home
 Go forth once more, and with them bend my
 knee,

There God will hear me, and my prayers
 will come
 Availing with theirs, and seal my altered
 doom!

How have I sinn'd! all holy things forsworn,
 And dwelt in homeless solitudes apart,
 And pride, and hate, and baffling envy
 borne,

Striving with sophist-will to sear my
 heart,

To break all natural bonds with sinful art!
 And I have made a desert of my path,
 And left no love its solace to impart,
 No sympathies to soothe in life or death,
 And held a lightning track to blacken, blast,
 and scathe!

They who do love me most speak not my
 name—

My memory gives no gladness—no young
 eyes
 Grow bright at thought of me; each tender
 claim

I have renounced, still heaping injuries
 Upon my soul and theirs,—mad sacrifice
 Of self-esteem, and love, and pleasant
 years!

My wife, my lovely ones, I will arise
 And take back to my home repentant
 tears,

Kindness, and steadfast faith, and whate'er
 life endears!"

From the Monthly Review.

ELEMENTS OF PHYSICS, OR NATU-
 RAL PHILOSOPHY, *General and Medi-
 cal, explained independently of Technical
 Mathematics. Vol. II. Part I. Comprehend-
 ing the subjects of Heat and Light.* By Neil
 Arnott, M.D., of the Royal College of Phy-
 sicians. pp. 320. *Seco.* London: Longman &
 Co. 1829.

DR. ARNOTT'S previous volume has been so
 well received, that it has almost banished all

the flimsy productions, called popular, which
 falsely pretend to strip science of its mysteri-
 ous and repulsive aspect, and to exhibit it in
 holy-day apparel. The success of such a work
 shows most clearly that it is plain, but sound
 knowledge which the public want; and that
 those who previously pranked out science in
 meretricious gaudiness, little understood the
 character of English readers. In the portion
 of the second volume now before us, the high-
 ly talented author comes with fresh claims
 to the well-deserved patronage which he has
 already received; and in proportion to the im-
 portance and the great difficulty of the sub-
 jects, has he exerted himself to elucidate the
 most interesting facts, and to disembarass
 them of the technicalities, which are so puz-
 zling to the uninitiated. Dr. Arnott, however,
 is by no means a merely useful writer; for he
 frequently introduces passages, eloquently
 written, and evincing a mind susceptible of the
 beauties, as well as the scientific utilities, of
 the objects of creation. We cannot better ex-
 emplify this, than by quoting his introductory
 paragraph to the subject of Light.

"The phenomena of light and vision have
 always been held to constitute a most interest-
 ing branch of natural science; whether in re-
 gard to the beauty of light, or its utility. The
 beauty is seen spread over a varied landscape
 among the beds of the flower-gardens, on the
 spangled meads, in the plumage of birds, in
 the clouds around the rising and setting sun,
 in the circles of the rainbow. And the utility
 may be judged of by the reflection, that had
 man been compelled to supply his wants by
 groping in utter and unchangeable darkness,
 even if originally created with all the knowl-
 edge now existing in the world; he could
 scarcely have secured his existence for one
 day. Indeed, the earth without light would
 have been an unfit abode even for grubs, ge-
 nerated and living always amidst their food.
 Eternal night would have been universal death.
 Light, then, while the beauteous garb of na-
 ture, clothing the garden and the meadow,—
 glowing in the ruby—sparkling in the dia-
 mond,—is also the absolutely necessary medi-
 um of communication between living crea-
 tures and the universe around them. The ris-
 ing sun is what converts the wilderness of
 darkness which night covered, and which to
 the young mind, not yet aware of the regula-
 rity of nature's changes, is so full of horror,
 into a visible and lovely paradise. No wonder
 then, if, in early ages of the world, man has
 often been seen bending the knee before the
 glorious luminary, and worshipping it as the
 God of Nature. When a mariner, who has
 been toiling in midnight gloom and tempest,
 at last perceives the dawn of day, or even the
 rising of the moon, the waves seem to him less
 lofty, the wind is only half as fierce, sweet
 hope beams on him with the light of heaven,
 and brings gladness to his heart. A man,
 wherever placed in light, receives by the eye
 from every object around—from hill and tree,
 and even a single leaf,—nay, from every point
 in every object, and at every moment of time,
 a messenger of light to tell him what is there,
 and in what condition. Were he omnipresent,
 or had he the power of flitting from place to

place, with the speed of the wind, he could scarcely be more promptly informed. And even in many cases where distance intervenes not, light can impart at once, knowledge which, by any other conceivable means, could come only tediously, or not at all. For example, when the illuminated countenance is revealing the secret workings of the heart, the tongue would in vain try to speak, even in lofty phrases, what one smile of friendship or affection can in an instant convey;—and had there been no light, man never could have been aware of the miniature worlds of life and activity which, even in a drop of water, the microscope discovers to him; nor could he have formed any idea of the admirable structure belonging to many minute objects. It is light, again, which gives the telegraph, by which men converse from hill to hill, or across an extent of raging sea,—and which, pouring upon the eye through the optic tube, brings intelligence of events passing in the remotest regions of space.”—pp. 163—165.

The science of light, we may remark, is one of those subjects of which most people know something, though there are parts of it which can only be studied by the aid of mathematics, and other parts of it which require some anatomizing of physiology, in order to comprehend them. The construction of mirrors, of microscopes, of telescopes, and all the instruments employed to assist vision, is nearly settled, and little that is new on these subjects is, perhaps, to be expected; but some of the laws which regulate the propagation of light have recently been much elucidated by Arago, Biot, Brewster, and Herschel, the son of the celebrated astronomer.

We can ourselves well recollect (for the association is deeply interwoven with our feelings) how eager we were, even in boyhood, to pry into the secrets of optics. We well recollect of lighting upon an odd volume, where the science was treated with all the parade of geometry and algebra, which to us were, at that period, quite unintelligible. But even this abstruse and unknown language of mathematics did not deter us from conning over, again and again, the laws, the principles, and the facts which bore upon the history of light, or explained the appearances with which we were familiar. We were still more delighted when we read the experimental portion, and we remember well of stealing away, book in hand, to the woods, on a bright summer's day, and examining how the doctrine of shadows agreed with those of trees, and how the doctrine of reflection agreed with the pictures of waving branches in a little stream, which ran through the wood; and we tried, in every possible position, the effects of refraction in the case of a straight stick appearing to be bent or broken when partly in the water. At such an age it is, when observation begins to sharpen the young mind, and every little explanation to charm and to elevate; and the facts of philosophy to display their beautiful links of connexion; and the wonders of nature to stir up the young and enthusiastic spirit of curiosity to travel onwards and onwards, in spite of every obstacle and interruption, till it surmounts the most rugged ascent of the moun-

tain-barrier; and standing triumphantly on its loftiest pinnacles, looks abroad, with a conscious-pride, on the plains and valleys beneath, and exults, with a heart-bounding enthusiasm, that the earth and its fogs, its obscurities, and its ignorance, has been left far below. Then is the time to imbue the young mind with the genuine truths of nature and of philosophy, and to cheer on the spirit of enterprising research to the accomplishment of some grand discovery, or the execution of some lasting memorial of genius. Then is the time, when the character first takes its form, and the habits and dispositions are trained up to manhood, and when the mind is indelibly stamped with the broad mark of dulness, of mediocrity, or of exalted talent. At such an age, how exceedingly valuable a work like this of Dr. Arnett's becomes, as it may furnish the first fuel to the latent fire of genius—the spark which may afterwards kindle into a brilliant blaze.

We must remark, however, that the youth who has early reached some commanding pinnacle of the mountain, is placed on a very dangerous precipice, from which he must inevitably tumble, unless he has more caution and firmness than usually falls to the lot of the young. His triumph is short-lived. He for a moment, like the eagle, thinks that he can gaze on the sun; but with this his ambition is not satisfied; he tires of the uniformity of the sun's splendour, and longs after variety. The first view of the scene spread, like a map, under his feet, of sunny fields, cheerful villages and plains diversified with woods, and intersected by rivers,—is delightful, because to him it is new, and has all the beauty and all the mysterious suspense which would be thrown over a view of the futurities of life, were it possible to obtain this. But the beauty, and the novelty, and the suspense, give but a momentary feeling; he soon complains of their sameness and uniformity, and bends his eye on the distant horizon, where all is confusion and all is blank. He loses all relish for his bird's-eye prospect, which was at first so delightful: his eye, with all its keenness, cannot penetrate through the more distant obscurities; he descends from his elevation, to travel in pursuit of variety; he soon mingles with the inhabitants of the plain country, whose sober ambition never prompted them to climb the most humble eminence, and he is lost forever among ordinary men.

We may, perhaps, be accused of having drawn a fanciful picture, but we have not in sooth borrowed one tint from imagination. It is wholly derived from fact and from reality. It was observed in Greece, as Aristotle has recorded; and it is quite notorious in our own days, that when a boy appears as a prodigy, and carries off all the highest premiums at schools and academies, that his future career is never heard of; for, being satiated to cloying with his juvenile attainments, he becomes too proud, or too indolent, ever to advance beyond himself. He first becomes stationary, and then he retrogrades, and loses ground; for his more slow competitors, by their steady advances, soon come to outstrip him.

The same remark will apply to philosophy

itself. When it is once brought to a certain elevation, it never goes farther; for nobody will take the trouble to perfect a system which bears the name of another, and will be more contented to be the humble disciple of Newton or of Locke, and to learn their opinions by rote, than to stand forth as a discoverer, and bear all the opposition, and the criticism, and the controversy, which originality never fails to produce. Optics, in some of its branches, has long been held in such leading strings; but, in others, it has been pursued with a manly independence, and this has been rewarded with researches which are still, indeed, in their infancy, but which promise much: we allude to the polarization of light—a subject, however, which Dr. Arnot has not yet arrived at in the part of the volume now before us; we must, therefore, follow him into some of those branches which he has so simply and perspicuously illustrated. The following we think excellent:

"It has already been explained that light, like every other influence radiating from a centre, becomes rapidly weaker as the distance from the centre increases, being, for instance, only one-fourth part as intense at double distance, and in a corresponding proportion for other distances; while it is still farther weakened by the obstacle of any transparent medium through which it passes. Now the eye soon becomes sufficiently familiar with these truths to judge from them with considerable accuracy, of the comparative distances of objects.

"The fine gothic pile of Westminster Abbey may break upon the view in some situation where nearer edifices, and perhaps some minor imitations of its beauties, already fill and dazzle the eye with their brightness, but the misty or less distinct outline of the former warn the approaching stranger of its true magnitude, and prepare him for the enjoyment which a nearer inspection of its grandeur and perfection is to afford.

"A small yacht or pleasure-boat may be built from the same model or of the same comparative dimensions as a first rate vessel of war, and may be in view from the shore at the same time, only so much nearer than the ship, that both shall form images of the same magnitude on the retina of a spectator. In such a case, to an unpractised eye, it might be difficult to detect the difference, but to another, the bright lights of the little vessel, contrasted with the softer or more misty appearance of the larger, would leave no room for doubt. A haziness occurring in the atmosphere between the little vessel and the eye, might considerably disturb the judgment.

"In a fleet of ships, if the sun's direct rays fall upon one here and there through openings among the clouds, while the others remain in shade, the former immediately start in appearance towards the spectator. Similarly the mountains of an unknown coast, if the sunshine fall upon them, appear comparatively near, but if clouds again intervene, they recede and mock the awakened hope of the approaching mariner.

"A conflagration at night, however distant, appears to spectators generally as if very near, and inexperienced persons often run towards it with hope of arriving immediately, but find

after miles travelled that they have made but little part of their way.

"A person ignorant of astronomy deems the heavenly bodies vastly nearer to the earth than they are, merely because of their being so bright or luminous. The evening star, for instance, seen in a clear sky over some distant hill-top, appears as if a dweller on the hill might almost reach it—for the most intense artificial light that could be placed on the height would be dim in comparison with the beauteous star, yet to a dweller on the hill it appears just as distant as to one on the plain; nay, at thousands of miles nearer, the appearance would still be nearly the same.

"The concave of the starry heavens appears flattened above, or nearer to the earth in its zenith than towards its horizon, because the light from above having to pass through only the depth or thickness of the atmosphere, is little obstructed, while of that which darts towards any place horizontally through hundreds of miles of dense vapour-loaded air, only a small part arrives.

"The sun and moon appear larger at rising and setting than when midway in heaven, partly, as already explained, because while below they can easily be compared with other objects, of which the size is known, but partly, also, because of their less light in the former situation, while their diameters are always the same.

"A fog or mist is said to magnify objects seen through it. The truth is, that by reason of the diminished intensity of light, it makes them appear further distant without lessening the visual angles subtended by them; and because an object at two miles, subtending the same angle as an object at one mile, must be twice as large. The conclusion is drawn that the dim object is large. Thus a person in a fog may believe that he is approaching a great tree, fifty yards distant, when the next step throws him into the bush which had deceived him.—Two friends meeting in a fog have often mutually mistaken each other for persons of much greater stature.—A row of fox-glove flowers on a neighbouring bank, has been mistaken for a company of scarlet-clad soldiers on the more distant face of the hill. There are, for similar reasons, frequent misjudgments in late twilight and early dawn.—The purpose and effect of a thin gauze screen interposed between the spectators in a theatre and some person or object meant to appear distant, are intelligible on the same principle: a boy near, so screened, will appear to be a man at a distance.—The art of the painter uses sombre colours when his object is to produce in his picture the effect of distance.—On the alarming occasion of a very dense fog coming on at sea, where the ships of a fleet are near to each other, without wind, and where there is considerable swell or rolling of the sea, much damage is often done, but it is to be remarked in such a case that the size of ships approaching to the shock is always in idea exaggerated.

"The celebrated *Spectre of the Brocken*, among the Hartz Mountains, is a good illustration of our present subject. On a certain ridge, just at sunrise, a gigantic figure of a man had often been observed walking, and ex-

traordinary stories were related of it. About the year 1800 a French philosopher went with a friend to watch the phenomenon; but for many mornings they had paraded on an opposite ridge in vain. At last, however, they discovered the monster, but he was not alone; he had a companion, and singularly he and his companion aped all the motions and attitudes of the observer and his companion: in fact, the spectres were merely shadows of the observers, formed by the horizontal rays of the rising sun falling on the morning fog which hovered over the valley beyond, but because the shadows were very faint, they were deemed distant, and therefore seemed men walking on the opposite ridge, and because a comparatively small figure seen near, but supposed distant, appears of gigantic dimensions, these shadows were accounted giants."—Vol. ii. pp. 260—264.

Dr. Arnott has most wisely avoided the common slang of philosophy which talks of light, heat, electricity, galvanism, and magnetism, as caused by peculiar fluids. Philosophers of this imaginative school, describe light as consisting of particles as a fluid of inconceivable tenuity; and as a substance which can neither be weighed in scales, nor felt by the touch. All these descriptions appear to us to be exceedingly inaccurate; for the words particle, fluid, and substance, have a meaning altogether different in their usual applications from what is here given them. If light be called a fluid, it is surely but reasonable we should expect it to be like water, or oil, or some other fluid with which we are acquainted, at least, in having this property of fluidity. Light, however, does not appear to have any such property. If it be said, that by a fluid is meant a vapour or gas, light is also deficient in one essential property of either of these, since they can be kept in vessels which light cannot; for though light has been beaming into a room during the whole of a bright summer's day, the instant the window shutters are closed, the light disappears. Besides, gas or vapour can be weighed, and can, by particular management, be perceived by touch; when it is, for example, forced through a pair of bellows; but this will not hold with respect to light.

The opinion that light is composed of particles, is founded on the assumption for which we have not a shadow of proof, and not even an analogy to adduce in its support, though Niewenty most preposterously undertook to compute the number of particles of light given out by a candle in a given time! That light is a material substance, meaning by that, a thing which can be weighed or touched, or its bulk measured, is equally unproved, and is, indeed, contrary to the universal experience of mankind. To say, then, that light is a material fluid composed of particles, is not only giving us a string of meaningless words, which is too often done in books of philosophy;—it is actually leading us into erroneous notions, and substituting fiction and falsehood for ascertained facts.

We may ask, therefore, in what class of the things which be, must light be ranked, since it is not a fluid, nor a vapour, nor a gas, nor composed of material particles? Evidently, as we think, it must be classed with heat, electricity,

galvanism, and magnetism, which, though they agree in some properties, are as different in species (if we may so term it) from one another as iron, and wood, and water. Light has the property, with other things of the same class, of penetrating very hard bodies,—hence called transparent, such as glass and the diamond, the hardest of all known bodies. The assumed notion that light was made up of particles, led, consequently, to the assertion, that there are innumerable pores, or minute holes, in glass and diamonds, through which the particles of light pass. Nobody, of course, ever saw those holes or pores, and their existence remains to be proved.

Concerning the supposed particles of light, it is farther asserted, that they have no force, or, as it is technically called, *momentum*; that is, when light strikes our face, it is not felt as the wind is felt, nor does it pain the eye as sand thrown into it would do. This assertion, though perhaps it is a little better founded than some of the preceding, is not quite correct; for the eye really does feel pain, very similar, also, to pain arising from pressure, when it is exposed to a strong beam of light, as in looking at the sun, in which case not only the curtain of the eyelids is let down to protect it, but the iris besides, in order to protect the retina, instinctively contracts so much that the pupil almost disappears. What is more remarkable, the iris does not thus contract in any other case when the eyelids are shut as a protection against injury; in such cases, on the contrary, the iris expands. This may be readily proved by the simple experiment of threatening to injure a person's eye, and observing the state of the iris immediately before and after the circumstance. Of the several colours, red seems to have the strongest effect upon the eye, if we may judge from the eagerness of children and savages for stuffs of this colour. It is the most brilliant and splendid of all the colours, and has, in almost all countries, been chosen for the robes of princes; among the ancients, the statues of Jupiter, on high festivals, were painted red. In diseased states of the nerves, red seems to give more pain to the eye than any other colour. M. Richeraud says he has seen maniacs thrown into a rage, and others, supposed to have been long cured, whose madness came afresh at the sight of scarlet cloth. Bulls, turkeys, and other animals, are also enraged at the sight of scarlet. Green, on the other hand, is opposite to red in this respect, being the softest and least vivid of the colours. It adds plausibility to these views of the red rays of light striking or infringing most forcibly upon the eye, that they seem to have greater power in penetrating dense media, than any of the others: when the sun, for instance, shines through "the horizontal misty air, shorn off" all "his" other "beams," the red alone penetrates the fog, and makes the king of day appear like a plate of red hot iron. These hypothetical conjectures of what may be called the pressure or infringement of light, is somewhat countenanced by the coloured rings produced by external pressure on the closed eyelids; for the hardest pressure produces red or luminous flashes; the slightest pressure produces violet, indigo, and blue,

exactly in the order of the refrangibility of the colours. When the pressure, however, is made on the centre of the ball, or on the two corners of the eye at once, no flash nor colour is seen; a circumstance caused, perhaps, by the retina not being affected in the point of vision.

This leads us to consider the velocity of light, which is so great that, if we believe the doubtful calculations of astronomers, it takes only eight minutes and a half to come to us from the sun, a supposed distance of 95,000,000 miles. It must follow, from this, that we never see the sun exactly where he is, but where he was eight minutes and a half before. We cannot form a plausible conjecture how far the fixed stars may have receded from the place where we apparently see them, for we know not their distance; but astronomers have fancied that there may be some of them so very distant that their light has been travelling to the earth from the time of the creation itself for these six thousand years, and has not yet come into view. The following is Dr. Arnott's account of the velocity of light:—

"The extraordinary precision with which the astronomical skill of modern times enables men to foretell the times of remarkable appearances or changes among the heavenly bodies, has served for the detection of the fact, that light is not an instantaneous communication between distant objects and the eye, as was formerly believed, but a messenger which requires time to travel; and the rate of travelling has been ascertained in the same way.

"The eclipses of the satellites or moons of the planet Jupiter had been carefully observed for some time, and a rule was obtained which foretold the instants in all future time when the satellites were to glide into the shadow of the planet, and disappear, or again to emerge into view. Now it was found, that these appearances took place $16\frac{1}{2}$ minutes sooner when Jupiter was near the earth, or on the same side of the sun with the earth, than when it was on the other side; that is to say, more distant from the earth by one diameter of the earth's orbit, and at all intermediate stations the difference diminished from $16\frac{1}{2}$ minutes, in exact proportion to the less distance from the earth. This proves then that light takes $16\frac{1}{2}$ minutes to travel across the earth's orbit, and $8\frac{1}{4}$ minutes for half that distance, or to come down to us from the sun.

"The velocity of light, ascertained in this way, is such, that in one second of time, viz. during a single vibration of a common clock pendulum, it would go from London to Edinburgh, and back, 200 times, and the distance between these is 400 miles. This velocity is so surprising, that the philosophic Dr. Hooke, when it was first asserted that light was thus progressive, said he could more easily believe the passage to be absolutely instantaneous, even for any distance, than that there should be a progressive movement so inconceivably swift. The truth, however, is now put quite beyond a doubt by many collateral facts bearing upon it.

"As regards all phenomena upon earth, they may be regarded as happening at the very instant when the eye perceives them; the difference of time being too small to be appreci-

ated: for, as shown in the preceding paragraph, if our sight could reach from London to Edinburgh, we should perceive a phenomenon there in the four-hundredth part of a second after its occurrence.

"It is hence usual, and not sensibly incorrect, when we are measuring the velocity of sound, as when a cannon is fired, by observing the time between the flash and the report, to suppose that the event takes place at the very moment when it is perceived by the eye.

"In using a telegraph, no sensible time is lost on account of light requiring time to travel. A message can be sent from London to Portsmouth in a minute and a half; and at the same rate a communication might pass to Rome in about half an hour, to Constantinople in forty minutes, to Calcutta in a few hours, and so on. A telegraph is any object which can be made to assume different forms or appearances, at the will of an attendant, and so that the changes may be distinguished at a distance. A pole with moveable arms is the common construction, each position standing for a letter, or cypher, or word, or sentence, as may be agreed upon. Telegraphic signals between ships at sea are generally made by a few flags, the meanings of each being varied by the mast on which it is hoisted, and by its combination with others."—pp. 172—174.

The superiority of Dr. Arnott's manner of illustrating the principles of philosophy cannot be better exemplified, than in his elucidation of the refraction of light, or the bending of its rays in passing into a different medium, as from air into water, into glass, or any other transparent substance of different density from itself. A little consideration will lead to the inference that it is this which causes an oar to appear as if broken, when one part of it is in water and the other in the air. The principle can be strikingly illustrated by the common experiment of putting a piece of money into an empty cup, retiring till the edge of the cup barely hides the money from the sight, and then causing a friend to pour water over the money, which will again bring it into view. The experiment may also be made with the flower, the landscape, or whatever else happens to be painted on the cup. It will follow, that pouring water into the cup, makes it appear less deep than it is in reality. This informs us, also, why a clear stream of water seems less deep than it is; for the refraction of the light causes the bottom to appear higher than it is; the ignorance of which has more than once betrayed the unwary to venture into water beyond their depth to the hazard of their lives.

"Many a young life," says Dr. Arnott, "has been sacrificed to this error. A person looking from a boat directly down upon objects at the bottom of water, sees them in their true places and at their true distances, but if he view them more and more obliquely, the appearance is more and more deceiving, until at last it represents them as at less than half of their true depth.

"The ship in which the author sailed once in the China sea, before danger was apprehended, had entered by a narrow passage into a horse-shoe enclosure of coral rocks. When

the alarm was given, the predicament had become truly terrific. On every side, in water most singularly transparent, as the wave swelled, the rocks appeared to be almost at the surface of the water, and the anchor, which in the first moments had been let go to limit the danger, appeared to be lifted with them. It was judged that if the ship, then drawing 24 feet, or the depth of a two-storied house, had moved but a little way in almost any direction, she must have met her certain destruction. On sending boats around to sound and to search, the place of entrance was again discovered, and was safely traversed a second time as an outlet from that terrible prison.

"On account of this bending of light from objects under water, there is more difficulty in hitting them with a bullet or spear. The aim by a person not directly over a fish must be made at a point apparently below it, otherwise the weapon will miss it by flying too high. The spear is sometimes used in this country for killing salmon, but is a common weapon among the islanders of the Atlantic and Pacific Oceans for killing the albacore; the use of it, like that of the fly-hook in England, affording to the fishermen good sport as well as profit. The author once with much interest witnessed at St. Helena this employment of the spear. A small fish, previously half-killed, that it might not try to escape, was every minute or two thrown upon the water as a bait, in the sight of perhaps a hundred great albacores, greedily waiting for it at one side below, and knowing the danger to which they exposed themselves by darting across to seize it. Some albacore, bold enough, soon made at the mouthful, apparently with the speed of lightning, but yet with speed which did not save him, for every now and then the thrown spear met the adventurer, and held him writhing there in a cloud of his death-blood. After a victim so destroyed, the scene of action was changed.

"The bending of light when passing obliquely from water, is also the reason of the following facts. A straight rod or stick, of which a portion is immersed in water, appears crooked or broken at the surface of the water, the portion immersed seeming to be bent upwards. That part of a ship or boat, visible under water, appears much flatter or shallower than it really is. A deep-bodied fish, seen near the surface of the water, appears almost a flat-fish. A round body there appears oval. A gold fish in a vase may appear as two fishes, being seen as well by light bent through the upper surface of the water, as by straight rays passing through the side of the glass. To see bodies under water, in their true places, and of their true proportions, the eye must view them through a tube, of which the distant end, closed with plate-glass is held in the water.

"Certain states of the atmosphere depending upon its humidity, warmth, &c., change very considerably its ordinary refractive power; hence in one state of it, a certain hill or island may appear low and scarcely rising above the intervening heights or ocean, while in another state, the same object shall be seen towering above: and from a certain station, a city in a neighbouring valley may be either entirely

visible, or it may show only the tops of its steeples, as if the bed on which it rested had sunk deeper into the earth. In days of ignorance and superstition, such appearances have sometimes excited a strange interest.

"A beautiful phenomenon is observable in a day of warm sunshine, owing to the bending of light in passing through media of different densities. Black or dark coloured substances, by absorbing much light and heat from the sun's rays, and warming the air in contact with them, until it dilates and rises in the surrounding air, as oil rises in water, cause the light, from more distant objects, reaching the eye through the rarefied medium, to be bent a little; and owing to the heated air rising irregularly under the influence of the wind and other causes, these objects acquire the appearance of having a tremulous or a dancing motion. In a warm clear day, the whole landscape at last appears to be thus dancing.

"The same phenomenon is to be observed at any time, by looking at an object beyond the top of a chimney from which hot air is rising. An illicit distillery was once discovered by the exciseman happening thus to look across a hole used as the chimney, although charcoal was the fuel, and there was no vestige of smoke.

"This bending of light by the varying states of the atmosphere, makes precaution necessary in making very nice geometrical observations:—as in measuring base lines for the construction of maps or charts.

"As it is the obliquity between the passing ray and the surface, which in any case of refraction determines the degree of bending, a body seen through a medium of irregular surface appears distorted according to the nature of that surface. It is because the two surfaces of common window glass are not perfect planes, and not perfectly parallel to each other, as in the case of plate-glass, that objects seen through the former appear generally more or less out of shape: and hence comes the elegance and beauty of plate-glass windows: and hence the singular distortion of things viewed through that swelling or lump of glass which remains where the glass-blower's instrument was attached, and which appears at the centre of certain very coarse panes."—vol. ii. pp. 184—188.

We have mentioned above, that, in consequence of the time light takes to travel, we do not see the heavenly bodies exactly where they are, but where they were some minutes before, when the light left them. We have now to add, that in consequence of the principle of refraction, their apparent place is considerably changed. The air only extends a few miles above the earth, and beyond is an unknown region, supposed to be filled with something as much thinner than air, as air is thinner than water. The light of the sun and stars, therefore, when it passes from this rare medium into the thicker air is bent; but though they be really set, they will appear in view, in the same way as the money in the cup comes into view when the water is poured over it. We may, with equal justice, refer many of our erroneous judgments to particular states of the reflection of light. The obscure white light,

for example, reflected in the twilight from a pond, or other narrow piece of water, or from a white post or a birch-tree, may, by an apprehensive fancy, very readily be imagined to be a sheeted ghost escaped from the grave. We recollect an instance of a whole village having been thrown into consternation at the supposed appearance of a ghost among a row of tall beech trees, adjacent to the manor house. This ghost was reported to have been repeatedly seen in the form of a headless woman, dressed in white, climbing the trees with one hand, and brandishing a pale, glimmering torch in the other. On this apparition, however, being observed by some persons less timid, and less fanciful, it was found to be nothing more than the reflected light of a miner's lantern, gleaming among the white trees, on his going to his labour.

"It is remarkable," says Dr. Arnott, "when the imagination is once excited by some beautiful or striking view, how readily any visual hint produces clear and strong impressions. One day in the cosmorama, a school-boy visiter exclaimed that he saw a monstrous tiger coming from its den among the rocks;—it was a kitten belonging to the attendant, which by accident had strayed among the paintings. And another young spectator was heard calling that he saw a horse galloping up the mountain side;—it was a minute fly crawling slowly along the canvass. There is in this department a very fine field yet open to the exercise of ingenuity, for the contemplation of pictures representing motion or progressive events, may be made the occasion of mental excitement the most varied and intense. For instance, there are few scenes on earth calculated to awaken more interesting reflections on the condition of human nature than that beheld by a person who sails along the river Thames from London to the sea, a distance of about sixty miles, through the wonders which on every side there crowd on the sight—the forest of ships from all parts of the world—the glorious monuments of industry, of philanthropy, of science—the marks of the riches, the high civilization, and the happiness of the people. Now this scene was last year, in one of our theatres, strikingly portrayed by what was called a *moving panorama* of the southern bank of the Thames. It was a very long painting, of which a part only was seen at a time gliding slowly across the stage, and the impression made on the spectators was, that of their viewing the realities while sailing down the river in a steam-boat. In the same manner the whole coast of Britain might be most interestingly represented—or any other coast, or any line of road, or even a line of balloon flight. There was another *moving panorama* exhibited about the same time at Spring Gardens, aiming at an object of still greater difficulty, *viz.* to depict a course of human life; and the history chosen was that of the latter part of Bonaparte's career. Scenes representing the principal events were, in succession, and apparently on the same canvass, made to glide across the field of view, so designed that the real motion of the picture gave to the spectator the feeling of the events being only then in progress, and with the accompa-

niments, of clear narration and suitable music they produced on those who viewed them the most complete illusion. The story began with the blow struck at Bonaparte's ambition in the battle of Trafalgar, and to mark how completely, by representations of various moments and situations of the battle, the spectators were in imagination made present to it. The author of this work may mention, that on the occasion of his visiting the exhibition, a young man seeing a party of British preparing to board an enemy's ship, started from his seat with a *hurra*, and seemed quite surprised when he found that he was not really in the battle. To the first views there succeeded many others, similarly introduced and explained, in each of which the hero himself appeared: there were, his defeat at Waterloo—his subsequent flight—his delivery of himself to the British Admiral—his appearing at the gangway of the Bellerophon to thousands of spectators, waiting in boats around, while he was in Plymouth harbour, previous to his departure for ever from the shores of Europe—his house and habits during his exile, with various views of St. Helena;—and last of all, that solemn procession, in which the bier, with his lifeless corpse, appeared moving slowly on its way to the grave under the willow-tree. The exhibition now spoken of might have been made much better in all respects, yet in its mediocrity it served to prove how admirably adapted such unions of painting, music, and narration, or poetry, are to affect the mind, and therefore to become the means of conveying most impressive lessons of historical fact, and moral principle."

Mr. Hughes, we think it was, one of the contributors to the Spectator, once wrote an Essay upon "Nothing," as a contrast to the German Professor's treatise on "All Things and Some Other Things." Were we, in the same way, to comment upon darkness as some philosophers comment on light, we think we could reason as plausibly as they can for the real existence of darkness, which is said to be a mere privation of light, as cold is said to be a privation of heat: for the reverse seems to rest upon arguments equally probable. They say, for example, without a shadow of proof, that light is a fluid, and heat is a fluid; now were we to assert that darkness is a fluid, and cold a fluid, on what grounds could we be contradicted which would not apply as strongly to the philosophers just alluded to? If they say that they can prove the velocity of light, we say that we can equally prove the velocity of darkness—for if we were to extinguish the candles by whose light we are writing, darkness will dart through every corner of the room as rapidly as light will when they are relit: and when the sun sets, darkness travels as rapidly as light does when the sun rises. If they say that light penetrates glass, we may the same of darkness; for if we shut out the light, darkness will immediately make its way to occupy its place. Many experiments and arguments might be brought to prove this view of the subject; we merely throw out these hints to put our readers on their guard against taking every thing they find in books for unquestionable truth. We were once asked

by a stickler for the fluidity of electricity, how we proved that it was not a fluid, and we answered him by asking how he proved that it was not a cabbage or a piece of ice, to which it seems to bear about as much resemblance as it does to water, oil, or any other known fluid. By maintaining the fluidity of cold and of darkness we may always, by a *reductio ad absurdum*, put an end to such fancies, which put on the air and the strut of philosophy, while they are at bottom altogether baseless and air-drawn—without a tangible fact or a decent probability to support their flimsiness. Dr. Arnott's book is more free from such absurdities than any scientific work—popular or profound—with which we have ever met. The conclusion of the part before us is written with considerable eloquence, while it abounds with good sense, sound philosophy, and unaffected piety. Our readers should not fail, we think, to be pleased to see this excellent passage:

"The investigations in progress respecting the phenomena of light, are furnishing new proofs of the extreme simplicity of nature, amidst the boundless extent and infinite variety. When men thought of the sense of touch only as it exists at the tips of the fingers, or on the general surface of the body, they were far from suspecting that the sense of hearing had the near relation to it which subsequent discoveries have proved, and still less did they think, that the sense of sight was similarly related; but step by step they ascertained, 1st, of sound coming to the ear through the air—that air was a material fluid as much as water, consisting of the same or similar particles, only more distant among themselves—that a motion or trembling in the air, by affecting nerves exposed in the ear, produced the sensation of sound, as the trembling in a log of wood caused by the action of the saw produces a peculiar sensation of touch in a hand laid on the log,—and, finally, that common sound in all its varieties, is merely such trembling of the air, affecting a structure of nerve so exposed in the ear, as to be as much more readily excitable than the nerves in the fingers, and elsewhere in the skin, as the action or impulse of moving air is more delicate than that of common solids or liquids. And now, in the investigations respecting light, this kind of comparison is carried a step further, for it is become matter almost of certainty that the sensation of light is produced in a suitable nervous tissue in the eye, by a trembling motion in another fluid than air, which fluid pervades all space, and in rarity or subtlety of nature surpasses air vastly more than air does water or solids;—and while in sound, different tones or notes depend on the number of vibrations in a given time, so in light do different colours depend on the extent of the single vibrations. Can human imagination picture to itself a simplicity more magnificent and fruitful of marvellous beauty and utility than this! But farther, as air answers in the universe so many important purposes besides that of conveying sounds, although this alone comprehends language, which almost means reason and civilization—so also does the material of light minister in numerous ways, in the phenomena of heat, electricity, and magnetism.

"The truths now positively ascertained with respect to the nature of light and vision, are perhaps those in the wide field of human inquiry, which, acting on ordinary apprehension, most forcibly place the individual as it were in the presence of Creative Intelligence, and awaken the most elevated thoughts of which the human mind is capable. Had there been no light in the universe, all its other perfections had existed in vain. Men placed on earth would have been as human exiles with their eyes put out, abandoned on an unknown shore, of climate and productions totally new to them: every movement might be to destruction, for their perceptions would be limited by the length of their arms, and of their fearful groping steps, and the wretched beings, separating when impelled by hunger to search for food, would probably scatter to meet no more. But the material of light exists, pervading all space, and certain impressions made upon it in one place rapidly spread over the universe, the progressive impression being called a ray, or beam of light. The beams of light, then, from all parts coming to every individual, may be regarded as supplementary arms or feelers belonging to the individual, and which reach to the end of the universe, so that each person, instead of being as a blind point in space, becomes nearly omnipresent:—then these limbs or feelers have no weight, they are never in the way, they impede nothing, and they are only known to exist when their use is required! But this miracle of light would have been totally useless, and the lovely paradise of earth would have been to man still a dark and dreary desert, had there not been the twin miracle of an organ of commensurate delicacy to perceive the light, viz., of the eye; in which there is the round cornea of such perfect transparency, placed exactly in the anterior centre of the ball (and elsewhere it had been useless), then exactly behind this, the beautiful curtain the iris, with its pupil dilating and contracting to suit the intensity of light—and exactly behind this again, the crystalline lens, having many qualities which only complex structure in human art can attain, and by the entering light forming on the retina beautiful pictures or images of the objects in front, the most sensible part of the retina being where the images fall. Of these parts and conditions, had any one been otherwise than as it is, the whole eye had been useless, and light useless, and the great universe useless to man, for he could not have existed in it. Then, farther, we find that the precious organ, the eye, is placed not as if by accident, somewhere near the centre of the person, but aloft on a proud eminence, where it becomes the glorious watch-tower of the soul; and, again, not so that to alter its direction, the whole person must turn, but in the head, which, on a pivot of admirable structure, moves while the body is at rest; the ball of the eye, moreover, being furnished with muscles which, as the will directs, turn it with the rapidity of lightning to sweep round the horizon, or take in the whole heavenly concave; then is the delicate orb secured in a strong socket of bone, and there is over this the arched eyebrow as a cushion, to destroy the shock

of blows, and with its inclined hairs to turn aside the descending perspiration which might incommode; then there is the soft and pliant eyelid, with its beauteous fringes, incessantly wiping the polished surface, and spreading over it the pure moisture poured out by the lachrymal glands above, of which moisture the superfluity, by a fine mechanism, is sent into the nose, there to be evaporated by the current of the breath: still further, instead of there being only one so precious organ, there are two, lest one by accident should be destroyed, but which two have so entire a sympathy, that they act together as only one more perfect; then the sense of sight continues perfect during the period of growth from birth to maturity, although the distance from the lens to the retina is constantly varying; and the pure liquid which fills the eye, if rendered turbid by disease or accident, is, by the actions of life, although its source be the thick red blood, gradually restored to transparency. The mind, which can suppose or admit that within any limits of time, even a single such organ of vision could have been produced by accident, or without design,—and still more, that the millions which now exist on earth, all equally perfect, can have sprung from accident—or that the millions of millions in past ages were all but accidents—and that the endless millions throughout the animate creation, where each requires a most peculiar fitness to the nature and circumstances of the animal, can be accident—must surely be of extraordinary character, or must have received unhappy bias in its education.

“As a concluding reflection with respect to vision, we may remark, that all the provisions above considered have mere utility in view, for any one of them wanting would leave a necessary link in the chain of creation wanting: but, we have shown in a preceding part of the work, that if there had been white light only, susceptible of different degrees of intensity and shade, the merely useful purposes of vision would have been answered about as perfectly as with all the colours of the rainbow—which truth is instanced in the facts, that many persons do not distinguish colours, and that it imports not whether a person view objects in the morning, or at mid-day, or at even-tide, or through plane glass or coloured glass. While, therefore, the existence of light generally, and of the eye, speaks of Creative Power and Intelligence, the existence of colours, or of that lovely variety of hues exhibited in flowers, in the plumage of birds, in the endless aspects of the earth and heavens; in a word, in the whole resplendent clothing of nature,—because appearing expressly planned, as a source of delight to animated beings, speaks of Creative Benevolence, and may well excite in us towards the Being in whom those attributes concentrate, the feelings associated in our minds during this earthly scene, with the endearing appellation of ‘Father.’”—pp. 315—320.

We have not left room to notice his chapter on heat, which is equally well executed as that on light. We must, therefore refer our readers, who are interested in the subject, to the work itself, which we again cordially re-

commend as both perspicuous and profound—qualities which are very rarely found combined in the same volume.

From the British Magazine.

THE MOONBEAM.

BY F. MULLER.

“That every soft and solemn spirit worships.”—*Maturia.*

How hushed and solemn is thy bright rise,
Thou spirit that rulest the midnight skies;
Shadowed and dim, as a dream may be,
Afar from the depths of eternity!

Thou art rising in beauty, and ocean smiles,
And light is shed over her thousand isles,
And silence is spreading from shore to shore,
O'er the wild waves moan, and the billows' roar.

Where a fount is seen in the forest shade,
Through the heavy gloom by the pine-boughs made,

Where a flash is sent from its silvery spray,
It is waken'd to beauty by thy bright ray.

O'er the vaulted roof of some olden shrine,
Where a stream wells forth from its mossy mine,

Whence music flows with a murmured sound,
There soft as a shadow thy place is found.

By the holy haunt of some chapel cell,
Thou art listing the chime of a silver bell,
Or the distant voice of some valley's hymn,
Breathing faintly clear through the midnight dim.

Where the flowers are sleeping in gentle dew,
Where the woods repose in the midnight blue,
Where the groves are spread—where their beauty lies,
Is a ray of thine from the sapphire skies!

O'er the shadowy rest of a thousand graves,
Where the dead repose by the sound of waves,
Where the cross is raised o'er some marble tomb,
Thou art shedding a light through the solemn gloom.

Where the green turf is raised in burial heaps,
Where some churchyard lone in the moonlight sleeps,
With a silvery gleam upon grave and flower;
Thou art there in thy silence at midnight's hour.

Thus over earth, and the solemn sea,
Through the beautiful night thou art shining free,
As a holy dream, or a visioned spell,
Or a midnight presence visible!

But unto man thou art more than these,
When slumber comes with its mysteries,
When a light is shed, when a dream is given
Pictured with hues as are those of Heaven!

From the *Edinburgh Philosophical Journal*.

OBSERVATIONS ON THE ANCIENT ROADS OF THE PERUVIANS. By John Gillies, M. D. M. W. S. Communicated by the Author.*

My attention was first directed to these roads in January, 1825, when, with the view of examining the celebrated silver mines of Uspallata, I was induced to pay a visit to the owner of one of these who was likewise the proprietor of the neighbouring Valley of Uspallata. It being then the hottest season of the year at Mendoza, his family had removed with him to his residence in the valley, to enjoy the cool air of the mountains. Attached to the house were to be seen all the machinery and other requisites for grinding and amalgamating the silver-ores; some people were then employed in reducing the ores which had been previously collected, the whole being under the superintendence of Don Jose Arroyo, a native of Peru, somewhat advanced in life, and whom I found intimately acquainted with the topography of his own country, and the customs most prevalent among them. He had taken an active part in the revolutionary proceedings in Peru against the dominion of Spain, and as Peru was still in the hands of the Spaniards, he had then, like many others of his countrymen, taken refuge in one of the neighbouring provinces, which had been more fortunate in their endeavours against the mother country.

While enjoying the hospitality of my friends, I took advantage of the occasion to visit all the most interesting objects which presented themselves in the neighbouring mountains and valley, and, among others, at the recommendation of the Peruvian already mentioned, was induced to visit the western side of the valley, at which place there existed, as he had been some time previously informed, very distinct traces of these ancient roads, usually known by the name of Camino del Inga, or road of the Incas, some instances of which he had previously witnessed in Peru; and the result of my visit was such as gratified me far beyond my expectations.

On first seeing these roads, I was much surprised at finding them in such high preservation, that their extent and dimensions could be distinctly traced to a great extent, although there is every reason to conclude that they have been rarely trodden on by the foot of the traveller, since the discovery and conquest of these countries by the Spaniards, now more than 300 years ago. I examined the road in several places, at some distance from each other, and found it to measure fifteen feet in breadth. The principal preparation which it seemed to have undergone was that of levelling, and the removal of all impediments, such as shrubs, large stones, &c.; its surface consisted principally of the soil, gravel, and small stones which characterized the surrounding district, and seemed altogether to constitute a road sufficient for all the purposes of communication, in a country where it is so little liable to injury from the elements, and to a people

who made all their journeys on foot, and possessed no other beasts of burden except the llamas and alpacas, none of which, it is probable, ever accompanied them to such a distance from their native country. The circumstance which appeared the most remarkable, was the total absence of every kind of shrubs from the line of road, unless where it had been crossed by some occasional mountain torrent, or more permanent watercourse, which, carrying down with it some of the neighbouring shrubs, had left them there to take root: with this exception, its surface exhibited no other vegetation, except occasional tufts of grass, or of some herbaceous plants. Such inconsiderable encroachments of vegetation, during so long a period of time, may at first sight appear somewhat extraordinary, yet is easily accounted for in a climate such as that which characterizes the Valley of Uspallata, where it seldom rains, and where scarcely any dew falls; so that there generally does not exist sufficient moisture to nourish any other than a scanty vegetation, consisting of some thorny and resinous shrubs, with a few patches of grass, and other less conspicuous plants. This remarkable difference in the vegetation of the line of road, and the surrounding country, renders the former particularly evident, more especially when viewed from the elevated part of it, which approaches the base of the mountains, where it is called La Punta del Cerro Negro. From this situation it may be traced, as far as the eye can reach, in one continued line, proceeding in the direction, by compass, of north by west. Unless where nature has presented almost unsurmountable obstacles to their doing so, they seem, in forming these roads, to have invariably followed the most direct course, disregarding ordinary inequalities in the surface, which might have been avoided by an inconsiderable detour.

In the subsequent conversations which I had with the Peruvian and other travellers on this subject, I ascertained that very distinct traces of these ancient roads are not only to be seen in many parts of Peru, but are frequently met with along the line of the Cordillera, which proceeds from Uspallata to Potosi in Peru, but only in such places where they have not been effaced by coming in contact with more modern roads. It may be distinctly traced from the place where I first examined it, along the whole extent of the Valley of Uspallata, which is said to terminate at the river of St. John's (Rio de San Juan,) upwards of 100 miles to the northward. It has also been traced as far to the southward as the Valley of the Tenuyan, about 34 degrees of south latitude, where, on the following year, when passing the Cordillera, by the pass of the Planchon, I made a fruitless attempt to discover it, none of my guides being sufficiently acquainted with the localities of the valley, to be able to point it out to me. From this valley, I have not yet been able to trace its course further south, either personally or by the testimony of others; yet I have little doubt, that, by a careful investigation, it might be ascertained to continue much farther to the south. From the Valley of Uspallata it takes rather a circuitous course to reach the Valley of the Tenuyan:

* Read before the Wernerian Natural History Society, December 5, 1829.

on leaving La Punta del Cerro Negro, it runs southward, and soon inclines more to the westward, until, at Los Ranchillos, it leaves the Valley of Uspallata, and joins with the high road to Chile, which skirts the northern side of the Rio de Mendoza, as far as La Punta de las Vacas, passing in this route by Picheuta and Tambillos, places whose name are of Indian origin. At the latter place are still to be seen the ruins of some habitations, supposed by many to have been used by the Peruvians during their journeys; but, by others, and perhaps with more probability, as having been erected to give temporary shelter to the negro slaves, who were formerly carried from Buenos Ayres across the mountains, by this road, for the supply of Chile and Peru. At La Punta de las Vacas, the Inca's road again leaves the high road, and may be traced across the river of Mendoza, and along the Valley of Toponagato, to the foot of the lofty mountain of that name, by which, it passes into the valley of the Tenuyan.

The early Spanish writers on these countries give details respecting these royal roads of the Incas; and, among other things, state, that from Cusco there existed a double line of these roads, over an extent of about 500 leagues, towards Quito, the one being made along the plains, at great trouble and expense, to obviate the difficulties presented by a sandy and loose soil, and the other along the mountains, in which cases ridges were levelled and valleys filled up, the latter being preferred in summer. These roads were twenty-five feet wide, and, at regular distances, had palaces, store-houses, and other habitations, for the use of the officers of the royal house and of the revenue. From Cusco these roads also proceeded in a southerly direction, dividing into several branches, one of which passing through Potosi, was continued by the route now called Camino del Despoblado, along the Cordillera of the Andes, belonging to Salta, La Rioja, San Juan, and Mendoza, the continuation of which is seen at Uspallata. This branch must have been originally formed for the purpose of communicating with the Araucanian Indians, and the other nations inhabiting Chile, and those tribes which inhabit the country along the eastern side of the Southern Cordillera of the Andes, and from thence to the Southern Atlantic Ocean and Cape Horn, all of whom are of quite a different race, and speak a language very different from the Quichua, or language of the Peruvian Indians. The cause why they seem to have preferred this route to any other, may be supposed to have been the greater abundance of water and other conveniences for travellers, than along either side of the mountains; these, in many places, being very scarce on the eastern side, and are altogether wanting on the western, where the desert of Atacama, bounded on the one side by the Pacific Ocean, and on the other by the Andes, is quite impassable. Besides the mountain route may be presumed to have been safer, more free from interruption, and more central for the purpose of communication with the various nations inhabiting both sides of the Andes. It is evident, from the size of these roads, and the precision and

care with which they have been formed, that their intercourse with these nations must have been considerable; and they are calculated to convey to us high ideas of the energy and civilization of the Indians of Peru, before they had any knowledge of European customs. At the present day, the Peruvian Indians are so tenacious of the customs and habits of their ancestors, that they generally prefer travelling on foot to every other mode, and thus, from constant habit, are capable of performing on foot very long journeys in a short space of time, without exhaustion, and with very little nourishment. To this cause may with justice be ascribed the circumstance of the Spanish officers, during the late war of independence, having so effectually retained this part of the new world under the dominion of the mother country; almost the whole of their infantry was composed of these Indians, with whom they were able to make such long and rapid marches, as rendered them, in a mountainous country, superior in point of mobility to any other force which could be brought against them. Some of these Indians, who are called Cholos by the people to the south, even now occasionally travel on foot from Peru, along these mountain routes, to visit Chile, Mendoza, and other places, where they carry on a petty traffic with gums, and various vegetable products of their own country, and a few articles of their own manufacture. This mountain route, in a considerable part of its extent, is also at the present day frequented by such of the inhabitants of Mendoza and San Juan as convey troops of mules for sale, and carry brandies and other articles of produce to Upper Peru, or Bolivia, as it is now called. This road is considered by them to be the most direct, and preferable to any other, on account of the plentiful supply of water, fire-wood, and pasture for their mules; and it is probable that, in time coming, it will be much frequented for similar purposes. This route is traversed in various parts of its extent, by a number of passes across the Cordillera of the Andes, among which, north of that of Uspallata may be mentioned, the Pass of Los Patos, celebrated as the road by which General San Martin crossed with his army from Mendoza to Chile before the battle of Chacabuco. Further to the north are situated the respective passes which communicate between San Juan and Coquimbo, and between La Rioja and Copiapo, which latter place is situated on the southern boundary of the desert of Atacama; and in that part which is denominated El Despoblado, it is crossed by the road which communicates from Salta to the port of Cobija, at the northern extremity of the Atacama desert. This latter place has of late risen to some importance, having, under the name of El Puerto Lamar, been erected into a free port by the government of Bolivia, for the introduction of goods into that country, so as to avoid the heavy transit duties and other charges to which they are subjected, on passing through the port of Arica and other ports of the Puertos Intermedios, which belong to the Peruvian Republic, or the government of Lower Peru. This spot, which is the only place where the Republic of Bolivia communicates with the

Pacific Ocean, notwithstanding all the encouragement given to it by an almost entire exemption from duties, is yet so scantily supplied with water for the use of man and beast, that it can never become a place of extensive population.

From the Monthly Review.

SALGUES ON REPUTATIONS.*

THE author of the volume now before us has already published three other volumes, on the various prejudices and errors which pass current in the world; and might, perhaps, if at all industrious in collecting, find ample materials for fifty volumes more. But of all the prejudices which infect society, none are more rife, or more absurd, than those which relate to the reputations of public men, authors, artists, or statesmen. A certain notion of a public man is formed no one knows how, and passes first to one person, then to another, till at length the whole reading world is possessed by it. This vague conception is quickly believed to be an exact representation of the character of the individual in question; and the idea, gaining ground from day to day, and passing into the records of the times, is sometimes handed down to posterity. For this reason it is highly praiseworthy and useful, to examine from time to time the notions which we and our contemporaries entertain, or appear to entertain, of those individuals who have distinguished themselves in our own days, or in the ages which have preceded, that, if necessary, we may correct our judgments, and approach more nearly to the truth.

M. Salgues, who, in the work before us, has undertaken to perform this task in part, has several qualities which befit him for the office. He possesses a keen perception of the ridiculous, a certain species of bold malicious wit, a passion for satire, considerable knowledge, and a mode of expressing his thoughts which is by no means destitute of felicity. The absence of other qualities, however, even still more requisite than those we have enumerated, in whoever would be the Rhadamanthus of this world, is strikingly visible. His philosophy, his tastes, his opinions, are Parisian. He wants that masculine judgment which distinguishes between the simply absurd and the odious. Like Draco, he visits the sins of vanity and egotism with no less severity than those of cruelty and profligacy. To crown all, while declaiming against prejudices he is prejudiced. Notwithstanding all this, his book is likely to enjoy a considerable share of temporary popularity, and, in spite of its defects, and of the vices of its author's mind, must unquestionably be useful in proportion as it is known.

The art of acquiring popularity, without deserving it, appears to be still more completely understood in France than in England. The secret, however, all the world over, is this: a man, desirous of enjoying the sweets of repu-

tation, contrives, by cant, by flattery, or by more solid and convincing means, to gain over a small coterie of would-be wits to his party, and engages them to inform the world of the extent and splendour of his merits. They raise up their voices, trumpet forth his praises in all quarters, and insinuate that not to discover the genius of their protégé, is to be exposed to the suspicion of wanting it. This is enough. Every man in this age is ambitious of being considered a *genius*, as well as of knowing every thing, and therefore every body falls into the trap, and lauds and magnifies the new idol, in order to be thought sagacious, and discerning, and well informed. Thus it is that men delude each other and themselves; while the quack, for whose benefit the farce is got up, laughs at the juggle, and enjoys the fruits of it.

M. Salgues is particularly attentive to persons who have acquired a reputation in this way. He commences with Madame de Genlis, a woman of unrivalled good fortune, and of considerable talents; but as genuine a quack as ever exhibited before the public. His exposure of the inordinate vanity, and audacious absurdity of her "*Memoires*," is cleverly executed; and if the work at all survive this well-deserved castigation, it will only prove how much more acceptable idle gossip and bigoted cant are, than useful truths, and unostentatious piety. Impressed with the dignity of his subject, the author commences his article on Madame de Genlis with these words: "It is now upwards of fourscore years since the good genius of France bestowed upon 'morality, upon theology, upon the sciences, and upon literature, Stephanie Felicite Ducrest, Marchioness de Sillery, and Countess de Genlis;" and he proceeds to expose to ridicule and contempt, the puerility and nonsense with which the old lady has stuffed the memoirs of her own life.

We believe it is the Margravine of Anspach who tells us that she narrowly escaped being squeezed to death, on the first day of her entry into this world, by the weight of an old friend of her mother, who came to visit her after the critical moment was over. Madame de Genlis, a still more important personage, was almost by miracle saved from the same fate; for the baillie of the place, who we suppose, was as fat as an alderman, was just about to seat himself on the cushion where she lay, when the fates, who had carved out a more glorious destiny for her, interposed, and rescued her from the baillie's unwieldy weight. No doubt the old gentlewoman recalls with delight the various perils and mischances that her youth suffered, and amuses her own family and friends by recounting them by the winter fire-side; but it appears to be a strange fancy to imagine that the world should occupy itself in learning that she was drenched; that at the age of eighteen months she narrowly escaped drowning in a fish-pond; that the usual means were employed to cure her squinting; and that when she was made a canoness, the Grand Prior, in attempting to cut off a lock of her hair, clipped off her ear, which, however, grew again.

Mr. Salgues's version of the Countess's his-

* *Préjugés des Reputations.* Par J. B. Salgues. Paris: 1830.

tory of her marriage, is extremely pleasant:—"As the amiable canoness grew up, she became charming. The Count de Genlis, a young man of twenty-seven, a colonel in the army, and nephew to the Marquis de Puisieux, minister for foreign affairs, beheld the portrait of the enchantress, and feeling that his heart was wounded by the sight, threw himself at her feet, offering her his fortune and his hand. The offer was accepted; the Marquis was angry; they married secretly, and set out for Picardy; and in this way the young Countess de Lanes became Countess de Genlis." It would be necessary to copy the whole of this illustrious lady's memoirs if we would describe all the sallies, the tricks, and the frolics of the young Countess. She conducted her husband's horses to water, riding astride upon them; and played off a thousand tricks upon the peasantry, knocking in the evening at the doors of the cabarets, and asking for *sarrechien*, and then running away with all her might, roaring with laughter. She moreover bled and physicked the villagers with various success, made them swallow decoctions of various herbs, and far from demanding payment for her prescriptions, she frequently added to her potions a good silver shilling, which made them go down more pleasantly. All this was delightful, but Paris was a thousand times more so.

When Madame de Genlis retired to the convent of Belle Chasse with the children of the Duke de Chartres, she was visited by several of the literary men who were at that period called "Philosophers," in Paris. D'Alembert, unquestionably in jest, promised her that if she would lay aside her bigotry, he would exert himself to create in the French Academy a place for four female members, of which she, of course, should be one; but the Countess, who prized her bigotry still more than her literary reputation, or at least, than a place in the French Academy, felt her rage kindle at the proposal, and the philosopher returned no more. La Harpe, however, who visited her for love, was not to be repressed, even by her bigotry; for love is much-enduring, patient, and unwearied. He celebrated her charms and her wit in a thousand songs, in a thousand madrigals, and the Countess replied to his passion in the same way. This was exactly as it should be. The love that evaporates in a song, should be paid with a song, and with nothing more.

The children who had been placed under the care of the Countess de Genlis, at length reached that age in which the services of a master appeared to be required. "The period," says M. Salgues, "approached, when according to custom, their education was no longer to be confided to women. But was Madame de Genlis an ordinary woman! Did not her knowledge, her talents, the greatness of her conceptions, elevate her above her sex? The Duke de Chartres came formally to consult her on the choice of a Governor. She named several able men, one after another, but the Duke approving of none of them, she said, 'Well, here is myself.' 'Aye, replied the Duke, you are the person;' and Madame de Genlis was forthwith transformed from the *Governess*, to the *Governor* or *Tutor*, of the

young princes." The dwelling of Belle Chasse now became the residence of all the sciences, and arts, and knowledge, known to man. Maupertuis had, a short time previously, proposed to found a city in which the language of the ancient Romans only should be spoken; but Madame de Genlis did much better: her dining-room became a polyglote school, and her house a living encyclopedia. Her pupils breakfasted in German, dined in English, supped in Italian, and by this ingenious method feasted body and mind at the same time. The mechanical arts themselves were not banished from this scientific mansion. The delicate fingers of the Countess wielded in succession the pen, the turning machine, the saw, and the plane. She moreover constructed twig baskets, admirable for their tastefulness and lightness, and manufactured laces, gauzes, and portfolios, superior even to those of England, together with marble paper and wigs.

In the immediate wake of this singular plan of education, we have the history, in epitome, of one of those scenes of literary squabbling which have so frequently been exhibited at Paris. During her education scheme at Belle Chasse, the Countess, besides her baskets and lace, had manufactured a kind of Romance, called "Adela and Theodore," which her lover, La Harpe, had undertaken to praise to the skies in the "*Mercur de France*." Instead of a panegyric from La Harpe, however, the "*Mercur*" only contained a critique, which was any thing but favourable. Revenge now took the place of love, though it does not appear how La Harpe was to blame; and as her quondam admirer had also "written a book," the power to avenge herself was in the lady's hands, and she availed herself of it to the utmost.

We quit Madame de Genlis, however, and pass on to the other characters here assembled together. M. Salgues is perfectly mistaken if he imagines that the *Bienheureux* Robert d'Arbisselles, abbot of Fontenrault, possesses a reputation worth demolishing. To use a phrase coined at the west end of the town, and not altogether intelligible out of that quarter, "Robert" is a person "whom nobody knows." The name of the convent of Fontenrault occupies, to be sure, a place in "Bayle's Historical and Critical Dictionary," where certain jokes, and scandalous anecdotes, are related of this "*Bienheureux*" personage; but "the world" has long ceased to take any interest in such matters, and the resuscitation attempted by M. Salgues will have no effect. We do not now care one straw whether the letters of Geoffry de Vendome and the Bishop of Rennes, be genuine or not. If Robert was guilty of loving this species of martyrdom, other holy personages, as Saint Adhelm, bishop of Canterbury, had been addicted to the same thing. In fact, the middle ages were as fertile in vice of every species, as they were in ignorance and foolery.

Madame de Maintenon, whatever may be the rank she occupies in Fuller's Dictionary, is tolerably well understood, in the present day, at least here in England. Her talents for intrigue, her affected piety, her inordinate ambition, and her heartless selfishness, have

long been acknowledged; and if a few harmless Jesuits have amused themselves in these latter days, when they have little else to occupy them, with descanting on her virtues, and her piety, why should we be angry? Men must employ themselves, and there seems to be something chivalrous in propping up equivocal reputations, like those of Madame de Maintenon, Jane of Naples, and Mary Queen of Scots. Let us pass on to characters more worthy of our notice.

The next personage whose character M. Salgues undertakes to examine, is Mohammed. Conscious, or at least fearful that he was about to tread on dangerous ground, our author adopted the plan of throwing what he had to say concerning the Arabian Prophet into dialogue, supposing that by this means he should the more easily escape censure, supposing that any of the truths he was about to utter should be found unpalatable. In old times this contrivance was sometimes found to succeed. Euripides vented his own incredulity through the mouths of his *dramatis personæ*, and Plato is thought to have done the same thing. But the trick has now become a little stale; and therefore M. Salgues, in adopting a form of composition which he could not manage adroitly, subjected himself to the certainty of being tedious, without deriving any equivalent advantage. The subject, although by no means new, is sufficiently fertile, and an author thoroughly impregnated with the spirit of the East, and at the same time aware of the extent and nature of the prejudices prevailing in Europe on the subject, might have rendered an outline of the character of Mohammed exceedingly striking. The ignorance of Europeans upon every point relating to the history, manners, and opinions of Asiatic nations, appears truly marvellous, when we consider the number of travellers who have traversed the East for the purpose of collecting correct information on the character of the people and their institutions. There are individuals still to be found who believe that Mohammed's coffin hangs suspended by magnetism between earth and heaven, in the great mosque at Medina; that during his lifetime he pretended to have cut the moon in two; and that he supposed women, that is one half of the whole human race, to be without souls. But it is not worth while to refute the opinions of persons so absurd as these. The Koran exists, let them read it; the book contains their refutation. The errors of the literary and the learned, however, must be treated differently; and on this particular subject the literary and the learned are but little more correct in their notions than the vulgar. M. Salgues has attacked and exposed some of these, but in a tone more calculated to irritate and offend than to convince. His knowledge of the East appears too confined for the task he has undertaken, and accordingly his success is very small.

To Mohammed succeeds Martin Luther, a great man also, and one who, in certain parts of Europe, is as little understood as the Arabian Prophet is in any part of Christendom. If M. Salgues is unsatisfactory in the preceding article, he is far more so in this. Luther

was a man above his reach. The intrepid, ardent, indefatigable advocate of liberty of conscience, who performed more than a hundred philosophes towards the emancipation of Europe, from the darkness of the middle ages, is here attempted to be shown up in a ludicrous light, as pretending to hold conferences with the devil, while he was only dreaming. It is true the author pretends all the while to be defending the great reformer; but we can discover that, in the midst of his apparent design, there is another, which is neither more nor less than to cover both Catholic and Protestant with ridicule. This is a relic of the philosophism of the last age, which is not at all to the taste of the present; and our lively satirist, by giving himself up a little too much to this view, is extremely likely to give more offence to real philosophers than to any other class of men whatever.

Leaving Martin Luther to be appreciated by more competent persons, we come to the famous Cardinal de Richelieu, who is here delineated with considerable truth and vivacity:

"This man," says our author, "has still a magnificent mausoleum in the Sorbonne; and in Paris, and in all parts of France statues are found to his memory. It was of him that Montesquieu remarked that 'he compelled his king to play the second part in his kingdom, while he was acting the first in all Europe; that he rendered the sovereign contemptible, while he was shedding glory upon his reign.' I would consent," adds M. Salgues, "that the Cardinal de Richelieu should have statues erected to him wherever the qualities of the mind are considered every thing, and those of the heart nothing, wherever the genius of politics is preferred to the rights of humanity, of justice, and of morality. He humbled the enemies of France, he raised to the highest degree of glory the crown left by Henry IV. to a feeble successor; he was the terror of the great, whom he cast bound hand and foot at the foot of the throne, but he was himself regarded with horror by the people, who were pressed to the earth by the weight of his intolerable despotism. He erected the power of the prince upon the ruins of public liberty. Let him have a statue raised to him, provided its head resembles those theatrical masks which are majestic on one side and hideous on the other. Nature had bestowed upon him a powerful mind and a superior judgment, but an iron heart. Covetous of every kind of glory, he began by studying with ambitious ardour the science of theology. At the age of nineteen he discoursed with éclat on various subjects in the college of the Sorbonne. His talents, his court favour, his reputation, raised him at the age of twenty-two to the honour of the episcopacy, and it was the Pope himself who consecrated him with his own hands. He now composed various controversial, pious, and ascetical works, and acquired a high reputation in the church. He expounded the principal points of the Catholic faith, and of those Christian perfections which he recommended to others, but took care not to practise himself. Ascending rapidly from one step to another, he became almoner to queen Mary de Medicis, whom he first served, then provoked to hatred,

then betrayed, and, hurrying her abominable son into a forgetfulness of his natural duties, caused to be banished from the court, from the kingdom, and to die in despair and misery in a foreign land. While the monarch's favourites furthered his designs, he made use of their services; when they could no longer serve his purpose, he cut them off, or cast them from the court; he took possession of the mind of Louis XIII., the degenerate heir of Henry IV., and discovering that he was hated by the great, that certain courtiers were planning his ruin, he seized upon that pretext to surround himself with a guard, at first of fifty archers, then of two companies of cavalry, and two hundred infantry, while his palace displayed greater pomp and more severe etiquette than that of the sovereign himself."

In describing the actions of this proud and unprincipled priest, our author falls into an error, not uncommon in historians of judgment superior to him, of attributing all the blame to the minister, and none to the king. For example, he observes that Richelieu plunged the monarch in a narrow and superstitious devotion, kept him in continual fear of sorcerers and the devil, and occupied his whole time in pilgrimages and "neuvaines," or nine days' prayers, while he himself was advancing with rapid strides towards supreme power. But how came Richelieu to possess this boundless influence over his prince's mind? Was Louis XIII. a mere puppet, without judgment, without intellect, without common sense? If he was, it was a matter of course that he should be led by the nose by the first man who should have the courage to attempt it; and he was merely unfortunate, in putting his head into the noose of a rogue like Richelieu. When one individual is said to lead another into an evil course of action, an accusation is advanced against both; against the one, of profligacy and power; against the other, of profligacy and imbecility; for there is no man so far destitute of common sense as not to see his way in morals.

It is perhaps impossible to penetrate so far into the secrets of those times, as to know with certainty whether Louis the XIII. really loved or hated the Cardinal. No doubt he was sometimes pettish and angry when any of his courtiers brought to his mind the sorry figure he cut, in the eyes of mankind; but, if he hated Richelieu, he was still more weak and despicable than we think him. On the taking of Rochelle, when our own tyrant, Charles I., betrayed the interests of the religion of his country, the bold and ambitious Cardinal drew upon him the admiration of people of all ranks, and on every side the enthusiastic cry of "Vive le Grand Cardinal!" was heard. At this moment, when, if ever the envy of the prince was likely to take vent, Louis only said, "Whoever loves him, loves me."

In perusing the unhappy chronicles of our species, we are often compelled to blush for the race to which we belong, but never so much as when we have before our eyes the picture of what men have been degraded to, in courts and palaces. Let the reader linger a moment on the following passage:—

"The hatred against the Cardinal was now

carried to its highest pitch; no one doubted that it was his intention to open the way to the throne, for his family. At this moment Louis XIII. fell sick at Lyons, and the courtiers exerted all the force of their hatred around his sick bed to produce the ruin of the Cardinal. The Marshal de Marillac offered to cut him off; the two queens urged the same request with tears and prayers, the only arms of women; and the Marshal de Bassompierre united his entreaties with theirs. They began to entertain some thoughts of giving way, and the Cardinal to prepare the means of escaping the storm; but the force of the disorder at length began to abate, the wretched monarch sinks into his usual state of slavery, which he detested but could not escape, and threw himself at the feet of the queen-mother to beg forgiveness for his oppressor. The Cardinal humbles himself and weeps, promising whatever is required of him, but inwardly determining to listen to his ambition and the thirst of vengeance. The queen-mother, expelled from the court, and shortly after from France itself, soon hastened away to die in grief and misery amongst strangers; the Marshal de Marillac, arrested at the head of his army, was imprisoned in the castle of Ruelle; was denied the privilege of being tried by his natural judges, while a commission, chosen by the Cardinal, conducted his trial in the very house, and under the eye of his enemy, who, when he was condemned to death, thus ironically complimented the magistrates on their baseness: "It must be confessed, gentlemen, that God bestows upon magistrates lights which he refuses to others; I myself, now, could not have hoped to find the accused sufficiently guilty to deserve death!"

The rest of the picture of this atrocious minister is given in the same vigorous style, but we can, of course, do no more than point at a few portions of it. The rebellion, and subsequent baseness of the Duke of Orleans; the proud stoicism of the Duke de Montmorency, who, when condemned to death by the parliament of Toulouse, refused to appeal to other judges, observing, "I will not quibble for my life;" the inexpressible meanness of the Prince de Condé, and the despicable vengeance of the Cardinal against a few poor women and monks, we must pass over entirely; but the passage which describes the wretched attempts of this tyrant to shine as a literary man, and which forcibly remind us of the furious ambition of the Sicilian despot to distinguish himself in the same way, is worth quoting, although the fact be tolerably well known.

Having glanced for a moment at the hypocrisy of Richelieu, the author proceeds:

"He moreover founded theatres, and with the aid of Colletet, and other poor devils of that stamp, composed various tragedies and comedies. He expended two hundred thousand crowns in getting up the representation of his would-be tragedy of *Miraine*, and lavished upon Colletet six hundred francs for six lines. In the beginning of his career he had had the ambition of shining by his theological works in the church; he had now the vanity to hope to distinguish himself in the world of letters by his compositions both in verse and

prose. But his verses were written by Gomberville, as his theological works had, for the most part, been by the Abbé de Bourzeis. Being desirous of exhibiting proofs of his affection for learning and literature, he founded the French Academy, and declared himself its protector. Nero and Domitian found poets to celebrate their praises; Horace and Virgil lavished the most contemptible upon Augustus; and the Cardinal de Richelieu found enthusiastic and servile panegyrista. Not content with this, however, he desired a monopoly of praise. If the success of the *Cid* raised the name of Corneille to the clouds,

'Si Paris pour Chimère a les yeux de Rodrigue,'

his self-love becomes offended, and to flatter his wounded vanity, he prevails upon the Academy to censure the *Cid*. Like all other celebrated ambitious men, he united the most astonishing contrasts, meanness and pride."

The article which follows, upon the burning alive of Urbain Grandier, and the possession of the nuns of Loudun, may, in some measure, be looked upon as a supplement to that on the Cardinal de Richelieu. It is composed in a very different style, and although less animated, is more interesting. The history of this unfortunate man, who seems to have been put to death because he was handsome, vain, and somewhat witty, is one of the most extraordinary that can be conceived; and although it must be sufficiently familiar to those who are versed in the history of superstition, it may still possess the charms of novelty for the general reader.

In entering on this narration, the author observes that he was far from thinking, when he commenced his work, that the name of Grandier would have found a place in it; since the decision of posterity seemed to have sufficiently avenged his memory. A recent publication, however, falling into his hands, changed his resolution. He discovered that, not content with having formerly burned him alive, there were certain priests who wished to perpetuate the belief in his guilt, notwithstanding that the world has ceased to have any faith in the existence of the crime of which he was accused, and for which, ostensibly at least, he was executed. Many of the details into which the author enters, for the purpose of exposing the wickedness of Grandier's accusers, are such as could not be printed in England, though they are allowed in France; but we shall lay before our readers enough of this extraordinary affair, to exhibit a true picture of the spirit of those times.

The people of the town of Loudun, for some reason or another, were desirous of possessing a convent of Ursuline nuns, and signified their desires in form to the bishop of Poitiers. This worthy prelate, who appears to have shared all the superstition and profligacy of manners of the times in which he lived, very readily yielded to their wishes, and understanding that in the convent of Poitiers there were several nuns whose reputations were a little the worse for the wear, he selected those pious and charitable sisters, and placing the most debauched of them all at their head, de-

spatched them in all haste to the good town of Loudun. On their arrival at the place of their destination, they found that there was no convent prepared to receive them, and that it would be necessary to put up for the present with an old haunted house, which was greatly fallen to decay. Neither was there at first any other provision than bread and water, a species of diet to which few persons resort from preference. Our nuns, who were persons of taste and judgment, soon gave affairs another turn. They laboured, acquired money, furnished their convent, and then began to look about for handsome confessors. Two persons presented themselves to perform this office for the nuns of Loudun, a priest with the very handsome name of Mignon, and Urbain Grandier, who possessed a person still handsomer than the name of his rival. M. Mignon, however, was not the man tamely to submit to rivalry in a matter of this kind, where the question was, who should possess the right to the consciences of some score or two of pretty nuns. He, therefore, set himself seriously to work to get rid of his adversary, not by the ordinary means prevalent among the vulgar, but by a fine, subtle, and curious policy which none but a monk could have devised. He determined to remove his enemy by burning him alive. To effect this a certain degree of ingenuity was necessary, but no very extraordinary genius for mischief, for mankind seem to have lent themselves in those times with wonderful facility to further the designs of any rogue whatever.

In the first place the nuns, whose intellects seem to have been somewhat deranged by the spirit of licentiousness, were to be persuaded that their evil desires had been inflamed, not by the conversation and the arts usually prevailing at that time in convents, and not to be repressed so long as human nature shall remain unchanged, but by the magical practices of Urbain Grandier. This part of the business was of course not very difficult, for the nuns, incapable of concealing their wanton propensities, were exceedingly willing to shift the blame from their own shoulders, even though it should rest on those of the handsome curé. Be this as it may, Mignon, terrified lest Grandier should rob him of his prey, pushed the matter to extremities, and with all the vehemence of a man urged on at once by the love of woman and the love of gain. Other passions, more or less malignant, united their force with these, perhaps, to hurry on the criminal in his course of guilt; but without any other motives, these were of themselves sufficient to account, under the circumstances, for his actions.

Grandier was now accused of having cast into the convent certain thorns and roses prepared by magic, which excited, in as many of the nuns as inhaled their scent, an irresistible passion for the magician. The curé seems, in fact, to have been in possession of that kind of magical art, which is all-powerful over the heart of woman, but which cannot be defined or described. Mignon, however, had resolved that his triumph in the world should be short. The accusation of sorcery was pushed with vigour, the nuns were interrogated, found to

be possessed by whole troops of devils in the pay and service of M. Grandier, and the master of these faithless and unruly servants was apprehended and cast into prison.

Among his other accomplishments the handsome curé was understood to possess the art of writing satires, and had, it seems, amused himself in an unlucky moment, in exercising this talent at the expense of the Cardinal de Richelieu. Observing persons thought they could perceive some secret connexion between this fact, and the accusation of sorcery, and imagined that the hand which struck the curé reached all the way from Paris. At present the fact is pretty well ascertained; and we can add to the other claims of the "Grand Cardinal" to the admiration of mankind, that of having caused a poor handsome young man to be burned alive, for having made himself too merry with his beard.

There is a singularly comic view in this horrible tragedy, which provokes laughter in the midst of the most fearful scenes. The Abbé Mignon having discovered that the pretty nuns were possessed by the spirit of lust, who, when interrogated, replied that his name was Astaroth, hitherto supposed by the learned to have been a female demon, brought the whole affair before the magistrates, and requested them to repair to the convent, to be present at the exorcisms, and to behold the wonders which accompanied them. The baillie and the civil lieutenant accepted of their invitation, and repairing to the convent, found the lady abbess and one of the inferior sisters, in an apartment furnished with seven little beds, and surrounded by Carmelite friars, a canon, and a surgeon. At the sight of the magistrates, the lady abbess, who probably experienced some slight access of terror at that moment, uttered a piercing shriek, like a little pig, and hid herself under the sheets of the bed; and then putting out her head again, she made the most horrible grimaces, in order to convince the man of authority that the seven devils to which she laid claim were actually in her bed at the time.

This part of the farce having been performed to the satisfaction of the Carmelites and the Abbé Mignon, the latter took up his exorcising book, and commenced the reading of those questions to which it was desirable that the devils should reply. It should be remarked, that in those times all devils were supposed to be extremely well educated, and to possess, among other accomplishments, a competent knowledge of all languages, ancient as well as modern. Their favourite dialect, however, was the Latin, and in order to accommodate himself to their taste, the Abbé Mignon put questions in that language. "Propter quam causam?" said he to the devil Astaroth, "ingressus es corpus hujus virginis?" (that is, "for what reason hast thou entered the body of this virgin?") The devil, with a degree of candour which does him great credit, immediately replied, "Per animositatem" ("through spite"). This point having been settled, and it being now clear that it was not for love, which, perhaps, the abbé previously suspected, Mignon continued, "Per quod pactum?" (by what covenant?) "Per Flores," (by that of

flowers,) said the devil. "Quales?" (what sort?) "Rosas;" (roses). But now came the question for which all the others had been contrived. "Quis misit?" (who sent them?) Here Astaroth, like a devil of some conscience, who betrayed his master with reluctance, hesitated for a short time, but at length muttered forth "Urbanus." This was coming close to the mark, but not hitting it; there might be other Urbanuses, and it would be difficult to obtain the permission of the magistrates to burn all persons of that name, in order to make sure of the right one. Another step, therefore, was to be made, and the intrepid Mignon continued, "Dic cognomen," (mention his surname). Here Astaroth made a dead pause. Should he, or should he not, obey the powerful exorciser, and expose his beloved master to the certainty of being roasted alive before his time.

"Some natural tears he dropped, but wiped them soon."

He paused again—then endeavoured to speak—then stopped. At length, however, plucking up his courage, he answered boldly, "Grandier." "Dic qualitatem," (mention his quality) said Mignon; and the devil having now passed the Rubicon, continued "Sacerdos" (a priest). "Cujus ecclesie?" (of what church?) "Sancti Petri." (of St. Peter.) "Quæ persona attulit flores?" (what person brought the flowers?) "Diabolica." (Madoiselle Diabolique.) After these words the devil grew sulky, or could muster no more Latin, and the lady prioress coming to herself, repeated her *Benedicite*, and partook of a slight collation, to recruit her strength after so great an exertion.

It now came to the turn of sister Clara's devil to be interrogated, but he turned out to be a demon of inferior accomplishments, and could speak no Latin. When greatly pressed, he merely replied in French, "To the other! to the other!" Upon this the magistrates appear to have begun to understand the matter, but without making any remark on the subject, they retired. Mignon, however, was not to be wearied by disappointment. He procured the favour of a second meeting, and the prioress, who was resolved to maintain the character of her devils for energy and activity, now foamed at the mouth, lolled out her tongue like a mad dog, and made the most frightful grimaces. The ceremony of exorcising had already commenced when the magistrates arrived; but it was now no longer the abbé Mignon who performed the conjuror. It was the curé of a neighbouring parish, a fierce, sombre, bigoted priest. In the midst of the operations a sudden terror was struck through the whole assembly. A cat, an animal in the form of which the devil often appears, dropped down the chimney in the midst of the exorcism, and after throwing the whole assembly into an agony of horror, sprang upon the top of the priestess's bed. Here then was Satan, in bodily reality in the midst of them. Every man crossed himself, and the exorcising curé, firmly persuaded they had got the devil among them at last, lifted up the cross, and with trembling hand flung up a flood of holy water at

the cat. Instead of vanishing in a cloud of smoke, the feline devil recovered a little from his fright, and altogether misunderstanding the affair, began to fawn and purr at his pursuers; and at length the lady prioress discovered that the devil on the top of the bed was no other than her own tom-cat.

The affair of the tom-cat amazed the exorcisers for some time, but they soon returned to their old humour, and longed for a more exciting spectacle. On one particular occasion a Scotchman, who happened to be present at the ceremony, and was somewhat sceptical, requested the conjuror to put a question or two to the devil in Gaelic. The curé observing that if it pleased God, Satan could speak Gaelic, as well as any other language, consented, and the Scotchman put a few short questions to his Satanic majesty, in the language of the Highlands. Satan, however, in all his travels, had never thought of visiting that part of the world, and could make nothing of this new jargon; he therefore replied pertly, "*Deus, non volo*," (God, I will not,) which was merely a cunning way of saving his credit.

Having been defeated in his design of passing for a great linguist, Satan got out of humour, began to give a tragical turn to the affair, and hurried on, as fast as possible, the condemnation of poor Grandier. The events which succeeded were no less indecent than horrible. Several of the nuns, however, seeing the fearful termination the affair was likely to have, now became alarmed, and confessed aloud that they had been playing the hypocrite, and accusing an innocent person. This only hastened the punishment of Grandier, who was brought before a mock tribunal, tried, and condemned. The poor man, after enduring all the tremendous pains which could be inflicted by torture, was at length carried forth to execution: between four and five o'clock in the afternoon he was taken from the prison by the executioners, who conveyed him to the place of punishment upon a kind of rope litter. On the way the unfortunate man conjured those whom he met to pray to God for him. He was then placed in a small car, and brought out before the church of St. Peter, to make the "*amende honourable*;" but he could not keep himself upon his knees, his legs having been broken to pieces by the torture he had endured, and falling flat upon his face, he lay in that posture until the executioners came and lifted him up. He then repeated his entreaties to the bystanders to pray for him. At this moment a Cordelier, whom he had vainly requested to see for the purpose of confession came up to him, and embraced him, saying, "remember the sufferings of our Lord Jesus Christ. You are a man of intellect, do not forget yourself. I bring you the blessing of your mother, who joins me in praying God to have mercy on you."

This, however, was by no means agreeable to the enemies of Grandier, and therefore the good and pious monk was beaten, and driven away with brutal violence by the archers, at the command of their superiors. It was not thought prudent that the people should understand what pious sentiments the unhappy Grandier entertained. The Provost's lieutenant,

regretting the part he was compelled to perform, begged the accused to forgive him: "you have not offended me," replied Grandier, "you have performed your duty with humanity."

A curé also, but whether one of those who had been leagued against him is not mentioned, came to ask his forgiveness, and to conjure him to pardon the injuries which had been heaped upon him. "I forgive every one," Grandier replied, "as I hope God will forgive me."

The funeral pile, as it may justly be termed, was now ready, the executioner seized upon his victim, and fastened him with an iron collar to a post, which had been fixed in the earth. The multitude, which consisted of persons from all parts of France, who had come purposely to see the show, was immense. Scarcely could the judges who had condemned him, and who were coming to witness the effect of their righteous sentence, make their way through the crowd. Hovering over the pile a flock of pigeons were seen, which would not by any means be frightened away. "They are, said one party, the devils, who are waiting for his soul. They are innocent doves, exclaimed others, come hither to bear testimony to the innocence of Grandier."

A large fly also came buzzing about his head; and one of the Capuchin friars, who had heard that the word *Beelzebub* signifies "Prince of Flies," exclaimed, "It is Beelzebub!" This same friar, with another brother of the same order, stood near the pile, book in hand, sprinkling about holy water, and exorcising the wood and the air. A promise had been made to Grandier, that, previous to his execution, he should be permitted to speak to the people; but even this miserable consolation was denied him; for when he would have spoken, the two bearded monsters threw so large a quantity of holy water in his face that he could not speak. A moment or two afterwards he made a second attempt to speak, but one of the friars stopped his mouth with a kiss. "There," said Grandier, "is a true Judas's kiss," which put the monk in so great a fury that he struck the victim several times in the face with the crucifix, under pretence of making him kiss it. According to some relations the crucifix had been made warm, in order, we presume, to burn his lips.

The last favour which his persecutors promised the unfortunate victim was, that, before the flames reached him, he should be strangled; but the two Capuchin friars contrived to intertwist the cord in such a manner that it was impossible it should compress the neck of the sufferer. Then one of them took a lighted torch in his hand, and holding it several times to his face, said, "Wilt thou not, unhappy wretch, acknowledge thy crimes, and renounce the devil?" "I have no knowledge of the devil," replied Grandier, "I renounce him and all his pomps, and I entreat God to have mercy upon me." Then father Lactantius, a re-collect friar, fearing lest the executioner should come and adjust the rope about his neck, and strangle him, set fire to the pile with his own hands. The flames quickly reached their victim: the executioner was unable to approach

him; and Grandier cried out, "Ah! where is the charity of father Lactantius? This is not what was promised me; but there is a God in heaven, who will hereafter judge thee and me; I foretell that thou wilt shortly appear before him." Then addressing himself to God, he said, with a loud voice, "Deus meus, ad te vigo, Miserere mei." The flames then enveloped him, and he was burned alive.

The remaining articles in the volume are various in character and merit. The one which is devoted to the abbé de la Mennais, though it have upon the whole more of a French than of a general interest, is curious, as the picture of a man of great talents so far besotted by his prejudices, as to desire the resuscitation of the opinions and feelings of the sixteenth century. This man, whom the author appears to regard as a kind of *Avatar* of Thomas à Becket, has a notion that mankind can never be happy until both kings and people are thoroughly subjected to the authority of the pope. Disgracing the Gallican church, of which he is a member, and which has always distinguished itself as the advocate of national independence in religious matters, he appears desirous of enslaving the consciences of mankind, as his own conscience has been enslaved by his imagination. His notions form an edifying contrast with those of his brethren in general, whom the spirit of the times has touched and chastened; and who are secretly undergoing a reform which can no longer be deferred.

There is one article in the volume, which shows in the most forcible manner how easy it is to declaim against the prejudices of others, while we cherish and preserve our own. It is that on the Duke of Wellington. Whether his character has ever been properly drawn or understood, either in England or France, we shall not now pause to inquire: but in raising his moral qualities at the expense of military reputation, M. Salgues evinces a degree of sagacity which we have never seen equalled. He is not, according to this oracle, a great general, but he is a very amiable man; he did not win certain battles by dint of talent, courage and foresight; but we must allow that he has brought about Catholic emancipation. In one word he has the misfortune not to be a Frenchman. Reverting to the foolish and worn out notions of past times this enemy of prejudices amuses himself with describing the English as the "natural enemies" of his countrymen; and labours heart and hand throughout the article, to awaken those bitter feelings which time has now blunted, and which humanity and good sense would eradicate for ever. He very justly blames England for bestowing such enormous sums of money upon the Duke; but when he compliments his own country for adopting a different line of conduct, he seems to forget that it is no praise not to lavish when one has nothing to give. His pedantic jargon about ancient Greece, the spirit of whose institutions he knows no more of than a child; about Paulus Emilius, Scipio, Pompey, and "*hoc genus omne*," is sickening and offensive in the extreme. Let him keep to his line. Greece and Rome are beyond his comprehension. England, also, and her poetry, are in the same predicament. He is at home only on

those topics which are hackneyed about in Paris and its coteries; and on these he gossips agreeably, and sometimes with a considerable degree of vigour.

It is singular enough that a writer of this stamp should not be a little more fertile than he is in anecdote. There are comparatively very few scattered through his work. He need not, however, abstain from this species of agreeable trifling from any notion of dignity, as it is perfectly within his province. Notwithstanding the numerous writings of this author, his name is very little known in England, where his new translation of "*Paradise Lost*," is scarcely ever heard of. He no doubt borrowed the idea of his work on *Errors and Prejudices*, from Sir Thomas Brown's famous book on *Vulgar Errors*, which may even still be considered as the most complete of the existing catalogues of the weaknesses and follies of man. But all works of this kind require to be handled with masculine power, in order to insure them a lasting reputation. It is not enough to be piquant, lively, amusing. There must be absolutely something of the stuff of the author's mind. Something new, striking, original. Something to excite thought, and project it into new channels. This is not the case with the writings of M. Salgues, which will please for a moment, and then pass away for ever. For one trait in his character he deserves great praise; he has adhered steadily to one set of principles, though he moved among the fearful scenes of the Revolution, witnessed the birth and extinction of numerous parties, and had apparently many motives for adopting a different course. He is now an old man, and has performed all that his character and talents enabled him to cope with; and it is some praise to say that there is no symptom of old age, or decayed powers, in his writings. If there is no trait of genius, there is vivacity, and spirit; if there is little depth, there is rapidity; if there is no earnest of duration, there is pleasure for the moment. In short, his work is a book for the indolent and the curious, not for the student or the literary man.

From the Quarterly Review.

PILGRIMAGES TO MEKKA AND MEDINA.*

It is remarkable enough, that the greater portion of a country which has been uninter-

* 1. *Travels in Arabia, comprehending an Account of those Territories in Hedjaz which the Mohammedans regard as sacred.* By the late John Lewis Burckhardt. Published by authority of the Association for promoting the Discovery of the Interior of Africa. 2 vols. 8vo. London. 1829.

2. *Mahomedanism Unveiled; an Inquiry, in which that Arch-Heresy, its Diffusion and Continuance, are examined on a new principle, tending to confirm the Evidences, and aid the Propagation of the Christian Faith.* By the Rev. Charles Forster, B.D., Chancellor of Ardfert, &c. &c. 2 vols. 8vo. London. 1829.

ruptedly inhabited by the descendants of the earliest people of whom history has preserved any record, should be as little known at this day as the most inaccessible regions of the old world, and, perhaps, less than any part of the new. We say the earliest people, for we can see no reason to doubt that the pedigree of the Bedouin is just as well established as that of the Jew. Gibbon, in defiance of all history, sacred and profane, affects to deny this, and, in his usual fashion, informs us, "that, in the story of the Hebrew patriarchs, the Arabs were pleased to discover the fathers of their nation"—that they "imbibed with equal credulity the prodigies of the holy text, and the dreams and traditions of the Jewish Rabbis." It was no new discovery, as he would insinuate; through every part of "the book," at which he sneers,—in Josephus and other ancient writers—he might have traced, had it suited his purpose, the unbroken stream of the history of the Ishmaelites. However widely the Jews and Arabs may now differ, they still address the God of their common patriarch in sister dialects; they both, for many ages, dwelt in tents, and pursued the same roving life in search of pasture and springs for their cattle; but the seed of Isaac, after passing through every stage of civilization, and exhibiting, in the variety of their national fortunes, immortal examples of all that can dignify, and of all that can darken, the character of our species, have long since, in visible fulfilment of a series of prophecies, been scattered over the face of the whole earth, as pedlars and traffickers; while the descendants of Ishmael have maintained their original position, and, by their unchanged mode of life, fulfilled no less distinctly the word of the angel of the Lord to Hagar, concerning her son—"He will be a wild man; his hand will be against every man, and every man's hand against him." The reader will find the subject of the Ishmaelitic descent of the Arabians treated in a clear and convincing manner, by Mr. Forster, in his learned and valuable work, "Mahomedanism Unveiled."

One reason, perhaps, for the very scanty knowledge we possess of Arabia, is the conviction that very little is to be found there worth knowing, and that little to be gained only at the certainty of great suffering and the risk of life. Syria, Palestine, and the ancient Chaldaea, have been frequently traversed in all directions by travellers, as well as overrun by conquerors; but the interior of Arabia is still just such a blank on our maps as the interior of Africa; if, indeed, it be not rather the less known of the two. From Mekka to Bussora, in a north-east direction, and from Mekka to Oman, south-east, the desert is continuous—scarcely interrupted, as the pilgrims state, by any of those wadys or valleys which exist on the great desert of Africa, and which afford a little herbage and water for the cattle of the caravans. The most considerable part of the population is distributed over the narrow strip of land, interjacent between a long mountainous ridge and the eastern shore of the Red Sea, and divided into the two provinces of the Hedjaz and Yemen; the former of which contains the two holy cities of Mekka and Medina; the latter is usually called by Europeans, Ara-

bia Felix. The total population of the Hedjaz, including the Bedouins of the mountains, does not exceed, according to Burckhardt's estimate, two hundred and fifty thousand souls, and that of Yemen may perhaps amount to about as many. On the other side of the Arabian peninsula, along the shore of the Persian gulf, Oman, containing the city of Muscat, Lahsa with a town of the same name, opposite which is the island of Bahrein, and Bussora at the head of the gulf, are the only other parts that can boast of a condensed population, living in towns and stone houses. Over the interior and desert portions are scattered the various tribes of Bedouin Arabs, dwelling in tents, and moving about in quest of food and water for their horses, sheep, and camels. From Mekka, running due east across Arabia to Lahsa, is a ridge of mountainous country, traversed occasionally by commercial Arabs of the two places, and represented to be exceedingly productive in dates, figs, pomegranates, grapes, and various other fruits.

Among these mountainous districts, it is hardly to be doubted that the purest specimens of aboriginal manners are to be found; and there are various circumstances mentioned by Mr. Burckhardt, which induce us to think it possible that some of these tribes ought not to be considered as entitled to partake in the claim to Abrahamitic descent. We may, in particular, allude to one most singular custom, militating so strongly against all that we have ever read of Arab jealousy, and nice sensibility of female honour, that the people of whom it is related must, we cannot but think, have separated in very ancient times from, if it ever at all belonged to, the Bedouin family. Nothing but our reliance on Burckhardt's judgment and strict veracity could induce us to transcribe what follows.

"The El Merekede, a branch of the great Asyr tribe, indulged in an ancient custom of their forefathers, by assigning to the stranger who alighted at their tents or houses, some female of the family to be his companion during the night, most commonly the host's own wife; but to this barbarous system of hospitality young virgins were never sacrificed. If the stranger rendered himself agreeable to his fair partner, he was treated next morning with the utmost attention by his host, and furnished, on parting, with provisions sufficient for the remainder of his journey: but if, unfortunately, he did not please the lady, his cloak was found next day to want a piece, cut off by her as a signal of contempt. This circumstance being known, the unlucky traveller was driven away with disgrace by all the women and children of the village or encampment. It was not without much difficulty that the Wahabees forced them to renounce this custom; and as there was a scarcity of rain for two years after, the Merekedes regarded this misfortune as a punishment for having abandoned the laudable rites of hospitality, practised during so many centuries by their ancestors."—Burckhardt, vol. ii. p. 378.

The nature of the interior, and the fierce manners of the inhabitants, were at all times a sufficient barrier to ward off external invasion, and to prevent either Greeks, Persians,

Romans, or Turks,—and all have made the trial,—from effecting the entire conquest of Arabia. The ancient writers have, therefore, left us little concerning it; and, in addition to the ferocious character of the wandering Arabs, the more modern fanaticism and intolerance of the religion of Islam have prevented Christian travellers from exploring even the more civilized and commercial parts of this country; the extent of which may be reckoned about some twelve hundred geographical miles in latitude, by eight hundred and fifty in longitude, or as large as France, Spain, and Portugal, together with the British islands. The holy cities of Mekka and Medina, near as they are to the commercial towns of Djidda and Yembo, on the Red Sea, are so strictly prohibited to all but Mussulmans, as to have rarely been visited by Christians, and by these only in the disguise of true believers. No Englishman, that we know of, except one, more than a hundred years ago, ever set foot in either of the holy cities. Gibbon would seem not to have been acquainted with Joseph Pitts's accurate account of Mekka, or he would not have said—"our notions of Mekka must be drawn from the Arabians. As no unbeliever is permitted to enter the city, our travellers are silent, and the short hints of Thevenot, are taken from the suspicious mouth of an African renegade."

The first Christian traveller who, in modern times, made any progress in Arabia, was Ludovico Barthema, a gentleman of Bologna, who, about the year 1503, set out on his travels to investigate "*quelche particella di questo nostro terreno globo*," and to examine "*con la propria persona e con gli occhi medesimi*," places and people, plants and animals. His travels through Egypt, Syria, Arabia, Persia, and India, are curious and amusing. At Damascus, he insinuated himself into the good graces of a Mameluke captain, about to escort a caravan of pilgrims to Mecca. It consisted of about thirty-five thousand persons, and forty thousand camels, guarded by sixty Mamelukes, for one of whose body Barthema passed. At Medina, he paid his devotions at the tomb of Mahomed. He describes Mekka as situated in a country cursed by God, producing neither tree nor herb, nor fruit, nor even water fit to drink; but the great temple, with its colonnades, and its thousands of lamps, excites his wonder and admiration. He ridicules the devotions of the pilgrims, which, however, he was obliged to imitate; and at the conclusion of the *hadj*, or pilgrimage, he concealed himself in the house of an acquaintance, until he found means to escape to Djidda, where he took shipping for Aden. Here he details with great good humour an adventure which threw him into prison, with an account of his assuming the character of an idiot, of the sultana falling in love with him, and of his escape to Ormuz, whence he proceeded through Persia to India. Barthema, by the way, a man of sound understanding, and apparently worthy of all credit, describes very minutely two unicorns which he saw at Mekka, sent as a present from the king of Ethiopia to the sultan of Mekka, and pledges his faith to the world that what he saw he has described with a strict regard to truth.

Our next traveller in Arabia is Joseph Pitts

of Exeter, the Englishman we have alluded to. This youth, at the age of fourteen or fifteen, desirous of seeing foreign countries, shipped himself as a sailor, contrary, he says, to the wishes of his mother, in the year 1678. The ship was captured by a Moorish pirate, and carried into Algiers, where he and the rest of the crew were sold into slavery, in which condition he remained fifteen years, having, in the course of that time, served three masters. The first was a monster of cruelty, beating and tormenting him for the sole pleasure, it would seem, of punishing a Christian dog. Sometimes he would hang him up by the heels, and beat him on the soles of the feet till the blood ran out, and then plunge them into hot brine. We have read of the Dutch boors of the Cape of Good Hope flogging their slaves or Hottentots by pipes—Pitts experienced something like it at Algiers. "My executioner," says he, "would fill his pipe, and then give me ten or twenty blows; then stop and smoke his pipe for a while, and then he would at me again; and, when weary, stop again; and thus cruelly would he handle me until his pipe was out." At length this Turkish brute sold him to another, who treated him pretty well, until a younger brother made proposals to him "to turn Turk," which Pitts rejected with disdain. He prevailed on his brother, however, to force him to yield, on the plea that, having been himself a great prodigal, guilty of every vice, even to that of murder, his own salvation depended on his bringing over an infidel to the true faith. The resistance of poor Pitts subjected him to treatment of the most cruel description—in vain he pleaded the remorse he would feel in acting against his conscience—in vain the terror of being "everlastingly damned"—he was hung up by the legs and beaten as before,—so that, at length, completely exhausted by ill treatment, his head forcibly shaven, and a Turkish dress put upon him, he was compelled to hold up his forefinger, and to repeat the fatal words—*La Allah ellallah Mohammed resul Allah*—"There is no God but God, and Mohammed is the prophet of God." In the midst of the deplorable state of melancholy and despondency, to which this compulsory act had reduced Pitts, he received a letter from his father, entreating him not to fall from his faith, the perusal of which caused him to weep bitterly. Soon after this, his master having his head taken off for engaging in a conspiracy against the Dey, his mistress sold him to a Turkish gentleman, an old bachelor, who took a great liking to him, carried him with him on his pilgrimage to Mekka, and, on their return, gave him his liberty. He now entered as a soldier, was put on board the Algerine fleet, and went to Smyrna, where, by the assistance of the English consul, he effected his escape. Pitts's book is one of those which tell a straightforward story in plain and simple language; and his account of Algiers, and of the ceremonies to be observed at the pilgrimage of Mekka, are surprisingly accurate.

In 1761, the King of Denmark sent Niebuhr,* with four other gentlemen, to explore

* There is a very interesting life of Niebuhr, by his son, the writer on Roman history.

the eastern countries, all of whom, except the first, died in the course of their travels. Sailing from Suez, they visited various places on the coast of Arabia,—Jidda, Loheia, Zebid, Mocha, and Sana: but found it impossible, when at Jidda, to attempt to proceed to Mekka; nor, indeed, did they visit any part of the interior. Niebuhr's account of the places they stopped at is written in a plain, unaffected style, and contains a correct though very general view of the several subjects which engaged their attention. His description of the coffee plantations of Yemen, on the declivity of the basaltic mountains, whose sides are cut into terraces that are supported by stone walls, accords exactly with those terraced vineyards which most of us may have seen in the Rheingau. The vale of Zebid, with its river and well-cultivated plain through which it meanders, inclosed by rocky and romantic hills, appears to be a spot that would be admired in the best parts of Europe; but it is a solitary example, and seems to have no parallel, even in Arabia Felix.

The next to be mentioned is Dr. Seetzen, who having spent some years in travelling over every part of Syria and Palestine, and conversed much with the Arabs of these countries, found himself in a condition to undertake a pilgrimage to Mekka under the assumed character of a Mohammedan. At Suez, he fell in with a party of pilgrims about to embark for Djidda, where, on his arrival, he placed himself under the protection of a Moorish merchant, and proceeded, without interruption, to the Holy City. Here he hired a guide to conduct him to the sacred mosque, and instruct him in the necessary ceremonies. The crowds that he observed rushing to the kaaba, in the centre of the temple, to kiss the "black stone," were quite astonishing; and created in his mind no little apprehension, lest some of them should be trampled under foot and suffocated. From Mekka he proceeded towards Medina; but that city being in possession of the Wahabees, who permitted pilgrimages only to Mekka, he was stopped on the way, but the governor, finding him to be a Christian Frank, allowed him to depart. Having reached Djidda, he proceeded to Yemen unmolested, and paid a visit to the city of Sana, which, with its high houses of stone, exhibited an appearance superior to most cities which he had seen in Syria, Palestine, or Arabia.

The traveller who, next in succession, visited Arabia and succeeded in reaching Mekka, was a Spaniard of the name of Badhia, but who assumed the fictitious name of Ali Bey el Abassy: of the account of this person's travels, as to its general accuracy, Burckhardt speaks favourably, though he observes, that "he made a strange mistake with respect to the host of Wahabees, whom he saw entering Mekka at the time of the pilgrimage; for he fancied that they came to take possession of the town, and flattered himself that he was present at the first conquest of Mekka by the Wahabees, while every child in the place would have informed him that this event happened three years before his arrival in the Hedjaz." He describes in similar terms with Seetzen, the tumultuous rushing of five or six thousand of

these militant pilgrims striving to kiss the black stone, and then crowding to the well of Zemzem, and destroying the ropes, buckets, and other appendages, in their eagerness to drink the holy water. From Mekka, Badhia proceeded towards Medina, but was stopped on his way by a Wahaby chief, and obliged to return to the coast.

The last, and by far the most intelligent traveller that has visited the two holy cities, is Mr. Burckhardt. The account we gave of his travels in Nubia, and of his high qualifications for collecting accurate information on all subjects connected with men and manners, will prepare the reader for expecting a more than ordinary degree of information in the present volume, and his expectations will not be disappointed. In the sketch of his life, by Colonel Leake, prefixed to the volume of "Travels in Nubia," it is said that "Burckhardt transmitted to the Association (*African*) the most accurate and complete account of the Hedjaz, including the cities of Mekka and Medina, which has ever been received in Europe. His knowledge of the Arabic language, and of Mohammedan manners, had enabled him to assume the Mussulman character with such success that he resided at Mekka during the whole time of the pilgrimage, and passed through the various ceremonies of the occasion, without the smallest suspicion having arisen as to his real character."

The equanimity of this excellent man was put to a severe trial from the moment he set foot on shore at Djidda the sea-port of Mekka, on the morning of the 15th July, 1814. From the person on whom he had a letter of credit, obtained in January, 1813, he met with a very cold reception; the letter was considered to be of too old a date to deserve notice; "indeed," says our traveller, "my ragged appearance might have rendered any one cautious how he committed himself with his correspondents, in paying me a large sum of money on their account." He took up his lodging within the bare walls of one of the khans, his whole stock of money having been reduced, in the course of his travels in Nubia, to two dollars and a few sequins. On the fourth day after his arrival he was attacked with a violent fever; was for several days delirious; and would in all probability have fallen under it, but for the aid of a Greek captain, a fellow-passenger from Souakin, who procured a barber to bleed him copiously in one of his lucid intervals. In the course of a fortnight he was just able to crawl about, but his money was all spent, and every article of life, owing to the approaching pilgrimage, unusually dear. The Greek captain, though ready to afford him the common services of humanity, was not disposed to assist him with any money. Being wholly destitute, and seeing no other means of purchasing a morsel of bread, he was compelled, by direful necessity, to sell a faithful slave who had been the most useful companion of his preceding journey in Africa. The Greek captain sold the man in the market of Djidda for forty-eight dollars;—he had cost Burckhardt only sixteen at Shendy.

With this money Burckhardt equipped himself anew in the dress of a reduced Egyptian

gentleman, and wrote to Cairo for a further supply, being determined to visit Mekka at the great pilgrimage in the following November. Should he even be disappointed in his expected supplies, and reduced to the necessity of earning a daily subsistence, during his stay in the Hedjaz, by manual labour, he was resolved to accomplish this object. It occurred to him, however, in the first instance, to try his fortune in a quarter where it was just possible he might be successful. Mahomed Ali, pasha of Egypt, was at this time at Tayf, beyond Mekka, with his army, preparing to attack the Wahabees in their strong holds. Burckhardt, having seen the pasha several times at Cairo, and had money dealings with him, thought that, without being guilty of too much effrontery, he might write to his physician, an Armenian of the name of Bosari, to ask him to accept a bill on his correspondent at Cairo, and order his treasurer at Djidda to pay to him the amount of it.

In the mean time Yakya Effendi the physician of Tousoun Pasha, son of Mahomed Ali, and then governor of Djidda, having heard of Sheik Ibrahim (the name our traveller had assumed when in Upper Egypt) being at Djidda, he invited him to his house, received him with great politeness, and as he was then preparing for a journey to Medina with Tousoun Pasha, and wished to remit to his family at Cairo the amount of his last year's savings, being about one hundred pounds, he kindly offered Burckhardt this money for his bill on Cairo. This seasonable supply placed him quite at his ease, and fortunate that it was so, for Bosari, as it afterwards appeared, had not thought proper to make any application to Mahomed Ali. The old pasha, however, having learnt from another quarter that Burckhardt was in Djidda, walking about in rags, immediately despatched a messenger, with two dromedaries, to the collector of customs, with an order to furnish him with a suit of clothes, and a purse of five hundred piasters, as travelling money, signifying a wish that he should repair immediately, with the messenger, to Tayf. The invitation of a Turkish pasha being considered in the same light as an invitation from a branch of the royal family in England,—a polite command,—and knowing that the clothes and money thus generously offered could not be refused without hurting the pride and exciting the resentment of a chief, whose good graces it was most important to conciliate, our traveller set off that very evening for the head-quarters of Mahomed Ali.

There is nothing very interesting in our author's account of Djidda and its inhabitants. This place is surrounded by a wall and ditch on the land side, and a wall also extends along the sea-front, flanked by a castle mounting eight or ten guns, and a battery which commands the whole harbour. These, however, are less relied on by the inhabitants, as a protection on the sea side, than is an enormous piece of ordnance, celebrated all over the Red Sea, which Burckhardt says carries a ball of five hundred pounds! The houses of the best quarter, along the sea shore, are well built of stone, and mostly two stories high; the streets are unpaved, but spacious and airy. In the

suburbs, and near the gates the dwellings are more huts, formed of reeds, rushes, and brushwood, inhabited by Bedouins, poor labourers, and the lowest classes, public women, and sellers of the intoxicating beverage called *bozza*. The water is execrable, and the wells are mostly private property. The surrounding country is a barren desert, presenting neither gardens nor vegetation of any kind, except a few date trees near one of the mosques. The number of inhabitants are estimated at fifteen thousand, mostly employed in commerce, and in supplying the numerous pilgrims from Egypt, the Barbary states, and other parts of Africa, from Syria, Persia, and India. The population, indeed, consists mostly of foreigners,—Indians, Persians, Syrians, Malays, Egyptians and other Africans; of real Arabs very few, and no Christians.

"The mixture of races in Djidda, is an effect of the pilgrimage, during which rich merchants visit the Hedjaz with large adventures of goods; some of these not being able immediately to settle their accounts, wait till another year; during this period, they cohabit, according to the custom of the country, with some Abyssinian slaves, whom they soon marry; finding themselves at last with a family, they are induced to settle in the country. Thus every pilgrimage adds fresh numbers to the population not only of Djidda, but of Mekka also, which is indeed very necessary, as in both towns the number of deaths is far greater than that of births."—vol. i. pp. 28, 29.

Djidda owes its chief commerce to its being the sea-port of Mekka, from which it is distant about fifty miles. The number of vessels belonging to it, and employed in the Red Sea and Indian trade, is estimated at two hundred and fifty sail. For four months preceding the Hadj, or pilgrimage, a caravan of camels sets out for Mekka every evening after sunset. At this time trade begins to be very active. Mr. Burckhardt has given the number of every kind of shops that occur in the principal street,—such as those where coffee is sold, butter which is melted and drunk like *ghee* in India, honey, oil from sesamum, fruits, mostly grapes and dates, brought from the interior, and also by sea. Then come the *kebab*, or roasted meat shops, the pancake shops, the sellers of soups, beans, sweetmeats, sour milk, Greek cheese, dried fruits, corn and rice, tobacco, drugs and perfumery, articles of Indian manufacture, coral and sandal-wood rosaries, cloth-shops, money dealers; and, in short, there is nothing that is the growth, produce, or manufacture of any part of the world, that is not to be had at Djidda during the Hadj. A Turkish watch-maker sells watches of good English manufacture, which all the Mekka and Djidda merchants are fond of wearing. Their artisans are mostly from Egypt. Indeed, this last country and the East Indies supply them almost entirely with foreign commodities. The Syrian Arabs are an industrious race, and their home manufactures make them entirely independent of foreign supplies; but the Arabs of the Hedjaz appear to have only two occupations,—commerce and the feeding of cattle. The people of the Hedjaz are worse off with regard to servants than even those of the United

States of America. No Arab, who has been born in either of the sacred cities, will act as a menial servant, unless compelled by absolute want of food; and the moment he is in good condition he ceases to labour, and either turns pedlar or beggar, the latter occupation being much encouraged by pilgrims, who are fond of displaying their charity on first touching holy ground at Djidda.

No reproach attaching to mendicity, nor even to robbery, the proud and high-spirited Bedouin of the desert is always ready to justify plunder; and if expediency should seem to recommend it, murder also. In the portrait of these unadulterated Arabs, all the lineaments in the features of their outlaw ancestor may still be traced: they conceive they have a right to recover by fraud, or force, any portion of the inheritance which they say was unjustly withheld from him by his father Abraham.—“who gave all that he had to Isaac.” With such notions, it is not surprising that their more civilized neighbours are the victims of their rapacity, or that caravans are laid in wait for, and attacked for ransom or pillage, when not sufficiently guarded, and plundered by stratagem when they are. Even the far-famed hospitality of the Arab is more the result of a feeling of pride than of humanity, and the way-worn or bewildered stranger, if possessed of any valuable property, has often found, to his cost, that Arab hospitality, like the kiss of Judas, only served to betray, while it hailed him with the *Salam aleykum*. Burckhardt says, that even among the degenerate Bedouins, who have been corrupted by dwelling in the towns of Arabia, the character of pride never forsakes them; they are jealous of strangers,—nor do they dissemble their contempt for those who do not speak the Arabic language, and assume the Arabic dress and customs. The Turks are considered by them as a very inferior people, though, nominally at least, their rulers. The ceremony and the abject forms of servitude, with which a Turkish pasha is approached, but ill accord with the bold and unceremonious manner in which they were accustomed to address their own sheriff.

“Whenever the Sheriff Ghaleb wanted a loan of money,” observed one of the first merchants of the Hedjaz to me, “he sent for three or four of us; we sat in close discourse with him for a couple of hours, often quarrelling loudly, and we always reduced the sum to something much less than was at first demanded. When we went to him on ordinary business, we spoke to him as I now speak to you; but the pasha keeps us standing before him in an humble attitude, like so many Habesh (Abyssinian) slaves, and looks down upon us as if we were beings of an inferior creation. I would rather,” he concluded, “pay a fine to the sheriff than receive a favour from the pasha.”—vol. i. pp. 97, 98.

The road from Djidda to Tayf offers nothing worthy of notice. The old pasha sent for Burckhardt as soon as he heard of his arrival; but the latter hesitated about waiting on him, on being told by Bosari that Mahomed Ali, on learning his desire to visit the holy cities, had observed in a jocular manner, to the cadi of Mekka, who was with him, “it is not the beard

alone which proves a man to be a true Moslem; but (addressing the cadi) you are a better judge in such matters than I am.” Burckhardt considered this an ill natured and unfriendly remark, calculated to prejudice him in the eyes of the cadi, and to lead to a discovery of his being an infidel, which, on such holy ground, might be attended with very serious consequences to himself; he, therefore, desired Bosari to tell the pasha that he would not attend his audience unless he would receive him in the character of a Turk. The answer was,—Tell him he is welcome, whether Turk or not. He received him courteously, but not a word concerning the money. Burckhardt afterwards visited the cadi, and found him with his secretary, a learned man of Constantinople, both of whom received him civilly, entered freely into conversation, and did not appear to have the least suspicion of his being any other than a real disciple of Mahomet. However, he had some reason to think that his friend Bosari had not played fairly with him; that he had impressed the pasha with an idea that he might have been sent as a spy to that country by the English government, to ascertain its present state, and that he was on his way to the East Indies. He was further confirmed in this opinion on perceiving that his actions were closely watched, and that he was seldom suffered to be alone. He determined, therefore, to set out for Mekka at once, where he arrived about the middle of the third day, having seen and conversed with the cadi on the road, who politely invited him to his house, an invitation which he did not accept, as he was desirous of being master of his own time, and allowed to make his observations without interruption.

At a certain distance from the Holy City, all pilgrims are required to strip themselves naked, throw away their garments, and put on the *ihram* or *chram*, two pieces of linen or cotton cloth, generally white, one of them wrapped round the loins, the other thrown loosely over the neck and shoulders, while the head remains wholly uncovered. Burckhardt at once complied with this custom, which has occasioned the death of many; for when the pilgrimage happens in winter, the assumption of the *ihram* is extremely prejudicial to the most robust constitution,—more especially to that of the northern Mussulmans, who have been accustomed to thick woollen clothes; “yet,” says Burckhardt, “the religious zeal of some who visit the Hedjaz is so ardent, that if they arrive even several months previous to the Hadj, they vow, on taking the *ihram*, not to throw it off till after the completion of their pilgrimage to Arafat.” It is said, that Haroun al Raschid and his wife Zobeyda once performed the pilgrimage on foot from Bagdad to Mekka, clothed only with the *ihram*; but indulged in the luxury of walking on splendid carpets the whole way. From what we read of the character and exploits of our old acquaintance Haroun, in the “Thousand and One Nights,” he was just the man to perform a freak of this kind.

The ancient Arabs, who reckoned time by lunar months, and intercalated a month every

* Hyde notices a circumstance “peculiarly

three years, had the pilgrimage fixed to a certain season, for the Hadj is not a Mussulman invention; but when Mahomet ordained, that the same pilgrimage should be continued, in honour of the living God, which, for ages before him, had been, in forgetfulness of the original patriarchal faith of the race, performed in honour of senseless idols, he prescribed the ceremony to a particular lunar month; and as the modern Arabs do not intercalate, its periodical returns became irregular, and in thirty-three years shifted through all the months of the year, from the height of summer to the depth of winter.

On entering Mekka, the temple or mosque must immediately be visited, whether the stranger be pilgrim or not. With this custom Burekhardt, of course, complied; but, before entering on his description of the holy place, we must gratify our readers by an extract from Mr. Foster's learned and curious volume, — a work which, in as far as the past is concerned, appears to us unexceptionable, though, in some of its prospective views, we are not as yet quite prepared to coincide:—

"The high antiquity of the Caaba," says Mr. Foster, "is undisputed. The permanent character of its rites, is certified by our knowledge of the adherence of the Arabs, in every age, to their ancient customs. But, from the uniform consent of Mahometan writers, it further appears, that the statues of Abraham and Ishmael, which, from remote antiquity, had held a conspicuous place in the Caaba, and constituted the principal object of its idol-worship, remained to the time of Mahomet, and were there found by the Mussulmans, after the capture of Mecca. Mahomet, Abulfeda tells us, when he took Mecca, in the eighth year of the Hejira, found and destroyed in the Caaba, on his entering the temple, the image of Abraham, holding in his hand seven arrows without heads or feathers, such as the Arabs use in divination; and surrounded with a great number of angels and prophets, as inferior deities, among whom, as Al Janabi and other writers add, was Ishmael, with divining arrows also in his hand.

"This incidental mark of the Abrahamic derivation, both of the ancestry, and the primitive worship, of the ancient Arabs, receives valuable light and confirmation from the one grand principle which is ascertained, by a variety of evidence, to have lain at the root of that worship, even in its most debased and corrupted form. In proposing, for the adoption of the Arabs, his doctrine of the Divine Unity, Mahomet professed only to revive and recommend anew to his countrymen the faith

corroborative of the common origin of the Jews and Arabians. The computation of time is among the most general, and the most fixed, of national usages: in few respects have nations been less disposed to vary, or to borrow from each other. But in the calendars, the Jews and the ante-Mahometan Arabs coincided; and the Arabic division of months is ascertained by the learned to have been the only division of time coincident with that of the Hebrew Scriptures."—See Hyde, *De Religionis Veterum Persarum*, p. 439.

which their fathers had held in its original purity, and which they themselves still retained, although clouded and concealed beneath the gross darkness of their idolatrous superstitions. The patriarchal doctrine of one supreme God, therefore, according to Mahomet, was, down to his time, still distinctly recognised in Arabia." And, not to adduce here any collateral testimonies to this fact, the appeals of the Koran to contemporary practices and usages, supply irrefragable proof that the fact was strictly so. The prayer used by the ancient Arabs when addressing the Allah Taala, or "Most High God," has been preserved by Shahrestani; and usage is brought in evidence against their idolatry, by Mahomet in the Koran. 'It is your Lord,' exclaims the pretended prophet, 'who driveth forward the ships for you in the sea, that ye may seek to enrich yourselves of his abundance by commerce. When a misfortune befalleth you at sea, the false deities whom ye invoke are forgotten by you, except Him alone: yet when He bringeth you safe to land, ye retire afar off from him, and return to your idols.' And again, 'When they (the idolaters) sail in a ship, they call upon God, sincerely exhibiting unto Him the true religion: but when He bringeth them safe to land, behold, they return unto their idolatry.'

"The Greeks and Romans, in their extremity, applied for succour to the deity appropriated to the specific case; thereby evincing that the prevalent belief had completely sunk to the level of their established mythology. But the Arabs, it appears, untutored and barbarous as they were in other respects, still preserved among them a practical sense of the existence, and the providence of the One Supreme Being. They wanted, indeed, with their idols, in times of security; but they instinctively betook themselves to 'The Most High God' in the hour of peril. For a single proof, stronger internal evidence needs not be desired than this fact supplies, of the alleged derivation of the faith of the Arabs, from their father Abraham.

"Various external signs, betokening its patriarchal origin, may be traced in the ante-Mahometan worship of the Caaba. Among these, one custom is sufficiently remarkable to claim

"The very curious romance of Antar," remarks Mr. Hallam, "written, perhaps, before the appearance of Mohammed, seems to render it probable, that however idolatry, as we are told by Sale, might prevail in some parts of Arabia, yet the genuine religion of the descendants of Ishmael was a belief in the unity of God, as strict as is laid down in the Koran itself, and accompanied by the same antipathy, partly religious, partly national, towards the fire-worshippers, which Mohammed inculcated."—*History of the Middle Ages* (new edition), vol. ii. p. 166.

"The apology of the pagan Arabs for their idol-worship is preserved in the Koran: 'We worship them only that they may bring us nearer unto God.'—Sale's *Koran*, chap. xxxix. ad init. conf. chap. xliii. ad init. Does this differ widely from the apology of the church of Rome."

distinct notice in this place, inasmuch as it has been alluded to, and censured, in the Koran. The Pagan Arabs were used to compass the Caaba naked, because clothes, they said, were the signs of their disobedience to God. The celebrated black stone of the Caaba also, the primitive source and object of Arabian idolatry,* strongly indicates the origin to which it has been uniformly referred. The Arabs attribute its introduction into the temple of Mekka, to the immediate posterity of Ishmael. The peculiar kind of superstition is just what might be expected to arise from the abuse of an early patriarchal custom, that of setting up stones, on particular spots, in honour of the true God. While the connexion is further made out, by the exact correspondence, in this particular between the idolatry of the ancient Israelites, and that of the ante-Mahometan Arabians—their identity might be largely shown, from the Old Testament: but a passage from the prophecy of Isaiah will suffice. The prophet thus indignantly reproves the Jews for their idolatry:—"Among the smooth stones of the stream is thy portion: they, they are thy lot: even to them hast thou poured a drink-offering, thou hast offered a meat-offering."—*Forster*, vol. ii. p. 404.

To return to Mr. Burckhardt.—He describes the Beitullah, or House of God, at Mekka, to consist of an open oblong square, two hundred and fifty paces long by two hundred broad. Pitts says it is like the Royal Exchange of London, but nearly ten times bigger. "It is a most beautiful temple," says Barthema, "in comparison with the Coliseum of Rome." The open space in the centre is surrounded by a quadruple row of columns on one side, and a triple row on the other three sides, united by pointed or Gothic arches, every four of which support a dome, plastered white—the number of these domes amounting to one hundred and fifty-two. From the arches of these colonnades are suspended lamps, some of which are lighted every night, and the whole of them during the nights of Rhamadan. The columns are upwards of twenty feet high, and somewhat more than a foot and a half in diameter some are of a reddish-grey granite, some of red porphyry, and others of white marble. Their total number is from five to six hundred. No two capitals or bases are exactly alike; in some cases, by the ignorance of the workmen, the former have been placed upside down on the shafts. On several of them are Cufic inscriptions, but not of very ancient date. The arches and some parts of the walls are gaudily painted in stripes of yellow, red, and blue, as are also the minarets. The Kaaba stands about the middle of the square. It is an oblong massive structure, built of large blocks of different sized stones, joined rudely together, and with bad cement; is about eighteen paces in length, fourteen in breadth, and from thirty-five to forty feet in height. It was entirely rebuilt so recently as the year 1627, the old one having been destroyed by one of those torrents which sometimes inundate the whole valley, in which Mekka is situated. It has but

one door, on the north side, seven feet above the ground, wholly plated with silver, and embellished with gilt ornaments. Near this door, in the angle of the wall of the north-east corner of the kaaba, is the celebrated "black stone," of an oval shape, about seven inches in diameter, composed of about seven small stones of different sizes and shapes, well joined together with cement, and perfectly smooth; appearing as if the original stone had been broken into many pieces by a violent blow and then united again. It is said, indeed, that Habem b'amr Illah, the mad king of Egypt, with a view to transfer the divine honours of the stone to himself, engaged an Egyptian in the year 413 of the Hejira, to destroy it,—that the man struck it three times with a bar of iron; but was slain for the impious act by the dagger of a native of Yemen; and the infuriated populace pursued and plundered the Egyptian caravan. Mr. Burckhardt thought this stone to be a species of lava, probably a piece of basalt. A border of some kind of cement, rising a little above the surface of the stone, surrounds it, and both this and the stone are encircled by a silver band. The four sides of the kaaba are covered with a rich black silk stuff hanging down to the ground, sent yearly from Cairo, at the Grand Seigneur's expense, at the time of the Hadj, when the old one is cut into small pieces, and sold to the pilgrims for nearly as much money as the new one costs." This curtain, or veil, called *Kesoua*, and considered as the *ikram* of the temple, is blazoned all over with the words "there is no God but God," &c., in gold letters of great size. The kaaba is surrounded by thirty-two slender gilt pillars, between every two of which are suspended seven lamps, always lighted after sunset. Our author, who, for a German, is singularly free from flights of enthusiasm, confesses that the effect of the whole scene, the mysterious drapery, the profusion of gold and silver, the blaze of lamps, and the kneeling multitudes, far surpassed any thing his imagination could have pictured.

In one of the several small buildings near the kaaba, is the famous well of Zemzem, whose water cures all diseases, and supplies the whole town for drinking and ablution. It is said to be the only sweet water in the whole valley; but Pitts found it brackish, and says, the pilgrims drink it so unreasonably, that "they are not only much purged, but their flesh breaks out all in pimples; and this they called the purging of their spiritual corruption." They not only drink, but have buckets of water poured over them, and then, says Barthema,

" "tum summi in culmine tecti
Obducunt nigros, solennia dona, tapetas.
Ipse olim quales, antiqua ex urbe Damasci
Misit Omar, quales, dum res et fata sinobant,
Pollentes opibus Pharii misere tyranni,
Incluta progenies Fatimæ; nunc maximus
Ista
Jura habet Othmanides, solium magno omine
firmans,
Et sanctum imperii pignus sibi vindicat uni."
Iter ad Meccam, &c. G. Canning ex *Ædo*
Christi, 1789.

* "Ὁ δὲ μαύρος λίθος—πᾶσι τοῖς προσκυνοῦνσι
ἐκτίμαται. Euthym. Zygabeni. in Panopl."

"the fools think their sins are washed into the well." One of the miracles of Mekka is, that the water of this well never diminishes, which is the less surprising, as it was first created by a miracle, to save the infant Ishmael, when dying of thirst in the wilderness. It is explained, however, by Burckhardt without a miracle, that the water flows through the bottom, being supplied by a subterraneous rivulet. The water, he says, is perfectly sweet, but heavy to the taste, slightly tepid, and sometimes in its colour, resembles milk.

The prescribed ceremonies are first, to repeat certain prayers in different parts of the temple; then to begin the *touaf*, or walk round the kaaba seven times, kissing the black stone at each circuit; then to proceed to the well of Zemzem, and drink as much water as they wish or can get. The second ceremony which the pilgrim has to perform is, to proceed to the hill of Safa, and there repeat certain prescribed prayers before he sets out on the holy walk, or *say*, which is along a level spot, about six hundred paces in length, terminating at a stone platform, called Meroua. This walk, which in certain places must be a run, is to be repeated seven times, the pilgrims reciting prayers uninterruptedly, with a loud voice, the whole time. The third ceremony is that of shaving the head, and walking to the Omra, about one hour and a half from Mekka, chanting pious ejaculations all the way. The two former ceremonies must, after this, be again repeated. The walk round the kaaba seven times may be repeated as oft as the pilgrim thinks fit, and the more frequent the more meritorious.

About seventy thousand persons assembled at Mekka, when Burckhardt made his pilgrimage, and submitted to the performance of these ceremonies. This is the least number which the Musselmans told Ali Bey there must necessarily be assembled at every pilgrimage, on Mount Arafat; and that in case any deficiency should occur, angels are sent down from heaven to complete the number. Pitts says precisely the same thing. When Ali Bey went through this part of the ceremony, he tells us, an assemblage of eighty thousand men, two thousand women, and one thousand little children, with sixty or seventy thousand camels, asses, and horses, marched through the narrow valley leading from Arafat, in a cloud of dust, carrying a forest of lances, guns, swivels, &c; and yet no accident occurred that he knew of, except to himself,—he received, it seems, a couple of wounds in his leg. One would have thought that Burckhardt's seventy thousand was a prodigious number; yet he tells us, that two only of the five or six regular caravans made their appearance this year,—the Syrian and the Egyptian. About four thousand pilgrims from Turkey came by sea; and, perhaps half as many from other distant quarters of the Mahomedan world. The Syrian was always considered to be the most numerous. It is stated, that when the mother of Motassem b' Illah, the last of the Abbassides, performed the pilgrimage in the year of the Hejira 631, her caravan was composed of one hundred and twenty thousand camels—that in 1814 consisted of not more than four or five thousand

persons, and fifteen thousand camels. Barthema states the Cairo caravan, when he was at Mekka, to have amounted to sixty-four thousand camels;—in 1814, the same caravan consisted mostly of Mahomet Ali's troops, with very few pilgrims. But Burckhardt says that, in 1816, a single grandee of Cairo joined the Hadj, with one hundred and ten camels for the transport of his baggage and retinue, whose travelling expenses alone, he supposes, could not have been less than ten thousand pounds. The tents and equipage of the public women and dancing girls were among the most splendid in this caravan. The Moggrebyn (*i. e.* Western, or Barbary) caravan, comprised of late years, altogether from six to eight thousand men (it has been forty thousand); in the year 1814, very few had joined it. The Eastern caravan of this year consisted chiefly of a large party of Malays from Java, Sumatra, and the Malabar coast. A solitary Afghan pilgrim, an old man of extraordinary strength had walked all the way from Caubul to Mekka, and intended to return in the same manner. Vast numbers of Bedouins flock to Mekka at the time of the pilgrimage; and others from every part of Arabia. Many of these pilgrims depend entirely for their subsistence, both on the journey and at Mekka, on begging; others bring some small productions of their respective countries for sale.

"The Moggrebyns, for example, bring their red bonnets and woollen cloaks; the European Turks, shoes and slippers, hardware, embroidered stuffs, sweetmeats, amber, trinkets of European manufacture, knit silk purses, &c.; the Turks of Anatolia bring carpets, silks, and Angora shawls; the Persians, cashmere shawls, and large silk handkerchiefs; the Afghans, tooth-brushes, made of the spongy boughs of a tree growing in Bokhara, beads of a yellow soap-stone, and plain, coarse shawls, manufactured in their own country; the Indians, the numerous productions of their rich and extensive region; the people of Yemen, snakes for the Persian pipes, sandals, and various other works in leather; and the Africans bring various articles adapted to the slave trade."—vol. ii. pp. 21, 22.

But, says Burckhardt,

"Of all the poor pilgrims who arrive in the Hedjaz, none bear a more respectable character for industry than the negroes, or *Tekrawys*, as they are called here. All the poorer class of Indians turn beggars as soon as they land at Djidda. Many Syrians and Egyptians follow the same trade; but not so the negroes. I have already stated in a former journal, that the latter reach the Hedjaz by the three harbours of Massouah, Souakin, and Cosseir. Those who come by Sennar and Abyssinia to Massouah, are all paupers. The small sum of one dollar carries them from Massouah to the opposite coast of Yemen; and they usually land at Hodeyda. Here they wait for the arrival of a sufficient number of their countrymen, to form a small caravan, and then ascend the mountains of Yemen, along the fertile valleys of which, inhabited by hospitable Arabs, they beg their way to Djidda or to Mekka. If rich enough to spare two dollars, they obtain, perhaps, a passage from Massouah direct to

Djidda, where they meet with such of their countrymen as may have landed there from Souakin or Cosseir. Immediately on their arrival at Djidda or Mekka, they apply themselves to labour: some serve as porters, for the transport of goods and corn from the ships to the warehouses; others hire themselves to clean the court-yards, fetch wood from the neighbouring mountains, for the supply of which the inhabitants of Djidda and Mekka are exclusively indebted to them, as none of their own lazy poor will undertake that labour, although four piastres a day may be gained by it. At Mekka, they make small hearths of clay, (*kánoun*), which they paint with yellow and red; these are bought by the *hadjis*, who boil their coffee-pots upon them. Some manufacture small baskets and mats of date leaves, or prepare the intoxicating drink called *bouza*; and others serve as water-carriers: in short, when any occasion requires manual labour, a Tekroury from the market is always employed. If any of them is attacked by disease, his companions attend upon him, and defray his expenses. I have seen very few of them ask for charity, except on the first days after their arrival, before they have been able to obtain employment. From Mekka, they either travel by land, or sometimes make a sea voyage by way of Yembo to Medina, where they again supply the town with firewood. Indeed, the *hadjis* would be much at a loss in the Hedjaz, if they could not command the laborious services of these blacks. During the Wahaby conquest, they continued to perform the pilgrimage; and it is said, the Saoud (the sheriff) expressed a particular esteem for them."—vol. ii. p. 22—24.

With these industrious creatures from Africa, says our author,

"The poor Indians afford a complete contrast, both in appearance and character: more wretched countenances can hardly be imagined; they seem to have lost not only all energy, but even hope. With bodies which appear scarcely capable of withstanding a gust of wind, and voices equally feeble, they would be worthy objects of commiseration, did not daily experience prove that they delight to appear in this plight, because it secures to them the alms of the charitable, and exempts them from labour. The streets of Mekka are crowded with them; the most decrepid make their doleful appeals to the passenger, lying at full length on their backs in the middle of the street; the gates of the mosque are always beset with them: every coffee-house and water-stand is a station for some of them; and no *hadji* can purchase provisions in the markets, without being importuned by Indians soliciting a portion of them. I saw among them one of those devotees who are so common in the north of India and in Persia: one of his arms was held up straight over his head, and so fixed by long habit, that it could not be placed in any other situation. From the curiosity which he excited, I was led to suppose that such characters seldom find their way to the Hedjaz."—vol. ii. pp. 26, 27.

Burckhardt made it his business to converse often and long with the Indian pilgrims of all classes; and it is satisfactory, on the whole,

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for us to learn, that while many of them entertained him with sarcasms, touching the manners and customs of our countrymen in their native region, they one and all summed up their account of the matter in these, or equivalent terms:—"But their *raj* (government) is good."

When all the required ceremonies have been gone through at Mekka, the whole concourse of pilgrims repair together on a certain day to Mount Arafat, some on camels, some on mules or asses, and the greater number barefooted, this being the most meritorious way of performing a journey of eighteen or twenty miles. "We were several hours," says Burckhardt, "before we could reach the outskirts of the town, so great was the crowd of camels. Of the half-naked *hadjis*, all dressed in the white *ihram*,—some sat on their camels, mules, or asses, reading the Koran—some ejaculated loud prayers, whilst others cursed their drivers, and quarrelled with those near them, who were choking up the passages." Having cleared a narrow pass in the mountains, the plain of Arafat opened out. Here the different caravans began to disperse, in search of places to pitch their several tents. *Hadjis* were seen in every direction, wandering among the tents in search of their companions, whom they had lost in the confusion along the road; and it was several hours before the noise and clamour had subsided.

In the morning, Burckhardt ascended the summit of Mount Arafat, from whence he counted about three thousand tents, dispersed over the plain, of which two-thirds belonged to the two *Hadj* caravans, and to the suite and soldiers of Mohammed Ali; but the greater number of the assembled multitudes "were," says our traveller, "like myself, without tents." Those of the wife of Mohammed Ali, the mother of Tousoun and Ibrahim Pasha, were magnificent,—the transport of her baggage alone, from Djidda to Mekka, having required five hundred camels.

"Her tent was in fact an encampment consisting of a dozen tents of different sizes, inhabited by her women; the whole inclosed by a wall of linen cloth, eight hundred paces in circuit, the single entrance of which was guarded by eunuchs in splendid dresses. Around this enclosure were pitched the tents of the men, who formed her numerous suite. The beautiful embroidery on the exterior of this linen palace, with the various colours displayed in every part of it, constituted an object which reminded me of some descriptions in the Arabian Tales of a Thousand and One Nights."—vol. ii. pp. 44, 45.

Mr. Burckhardt says, he estimated the number of persons assembled on the plain at seventy thousand; but whether any, or how many of them were supplied by "angels," he does not say; it is, however, deserving of remark, that he is the *third* traveller who mentions the same number. This enormous mass, after washing and purifying the body according to law, or going through the motions where water was not to be had, now pressed forward towards the mountain of Arafat, and covered its sides from top to bottom. At the appointed hour, the *cadi* of Mekka took his stand on a

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stone platform on the top of the mountain, and began his sermon, to which the multitude appeared to listen in solemn and respectful silence. At every pause, however, the assembled multitudes waved the skirts of their *ihrams* over their heads, and rent the air with shouts of "Lebeyk, allahuma lebeyk!"—"here we are at thy commands, O God!" "During the wavings of the *ihrams*," says Burckhardt, "the side of the mountain, thickly crowded as it was by the people in their white garments, had the appearance of a cataract of water; while the green umbrellas, with which several thousand *hadjis*, sitting on their camels below, were provided, bore some resemblance to a verdant plain." The assemblage of such a multitude,—to every outward appearance, humbling themselves in prayer and adoration before God,—must be an imposing and impressive spectacle to him who first observes it, whether Mahomedan, Christian, Jew, or pagan. "It was a sight, indeed," says Pitts, "able to pierce one's heart, to behold so many thousands in their garments of humility and mortification, with their naked heads, and cheeks watered with tears, and to hear their grievous sighs and sobs, begging earnestly for the remission of their sins." Burckhardt mentions the first arrival of a black Darfoor pilgrim at the temple, at the time when it was illuminated, and from eight to ten thousand persons in the act of adoration, who was so overawed that, after remaining prostrate for some time, "he burst into a flood of tears; and in the height of his emotion, instead of reciting the usual prayers of the visiter, only exclaimed—'O God! now take my soul, for this is paradise!'"

As the sun descended behind the western mountains, the *cadi* shut his book,—instantly the crowds rushed down the mountain, the tents were struck, and the whole mass of pilgrims moved forward across the plain on their return. Thousands of torches were now lighted; volleys of artillery and of musketry were fired; sky-rockets innumerable were let off; the pasha's band of music were played till they arrived at a place called Mezdelâ, when every one lay down on the bare ground wherever he could find a spot. Here another sermon was preached, commencing with the first dawn and continuing till the first rays of the sun appear, when the multitude again move forward, with a slow pace, to Wady Muna, about three miles off. This is the scene for the ceremony of "throwing stones at the devil;" every pilgrim must throw seven little stones at three several spots in the valley of Muna, or twenty-one in the whole; and at each throw repeat the words, "In the name of God; God is great; we do this to secure ourselves from the devil and his troops." Joseph Pitts says, "as I was going to throw the stones, a facetious *hadj* met me; saith he, 'you may save your labour at present, if you please, for I have hit out the devil's eyes already.' The pilgrims are here shown a rock with a deep split in the middle, which was made by the angel turning aside the knife of Abraham, when he was about to sacrifice his son Isaac. Pitts, on being told this, observes, "it must have been a good stroke indeed." The pil-

grims are taught also to believe that the custom of "stoning the devil," is to commemorate the endeavour of his satanic majesty to dissuade Isaac from following his father, and whispering in his ear that he was going to slay him.

This "stoning" in the Valley of Muna occupies a day or two, after which comes the grand sacrifice of animals, some brought by the several *hadjis*, others purchased from the Bedouins for the occasion, the throats of which must always be cut with their faces towards the Kaaba. At the pilgrimage in question, the number of sheep thus slaughtered "in the name of the most merciful God," is represented as small, amounting only to between six and eight thousand. The historian Kotobedyn, quoted by Burckhardt, relates, that when the Khalif Mokteder performed the pilgrimage, in the year of the Hejira 350, he sacrificed on this occasion forty thousand camels and cows, and fifty thousand sheep. Barthema talks of thirty thousand oxen being slain, and their carcasses given to the poor, who appeared to him "more anxious to have their bellies filled than their sins remitted." One is at a loss to imagine where, in such a miserable country, all these thousands and tens of thousands of camels, cows, and sheep can possibly be subsisted; the numbers may be exaggerated, but there is no question of their being very great. The feast being ended, all the pilgrims had their heads shaved, threw off the *ihram*, and resumed their ordinary clothing; a large fair was now held, the valley blazed all night with illuminations, bonfires, the discharge of artillery and fireworks; and the *hadjis* then returned to Mekka. Many of the poorer pilgrims, however, remained to feast on the offals of the slaughtered sheep. At Mekka the ceremonies of the Kaaba and the Omra were again to be repeated, and then the *hadj* was truly performed. Burckhardt makes no mention of any females becoming *hadjis* by a visit to Arafat, though Ali Bey talks of two thousand. There is no absolute prohibition, but from what follows, no great encouragement for the fair sex to go through the ceremonies.

"The Mohammedan law prescribes that no unmarried woman shall perform the pilgrimage; and that even every married woman must be accompanied by her husband, or at least a very near relation (the Shafay sect does not even allow the latter). Female *hadjis* sometimes arrive from Turkey for the *hadj*; rich old widows, who wish to see Mekka before they die; or women who set out with their husbands, and lose them on the road by disease. In such cases, the female finds at Djidda, delyls (or, as this class is called, Muhailil) ready to facilitate their progress through the sacred territory in the character of husbands. The marriage contract is written out before the *Kadhy*; and the lady, accompanied by her *delyl*, performs the pilgrimage to Mekka, Arafat, and all the sacred places. This, however, is understood to be merely a nominal marriage; and the *delyl* must divorce the woman on his return to Djidda: if he were to refuse a divorce, the law cannot compel him to it, and the marriage would be considered binding; but he could no longer exercise the lucrative

profession of delyl; and my informant could only recollect two examples of the delyl continuing to be the woman's husband. I believe there is not any exaggeration of the number, in stating that there are eight hundred full grown delyls, besides boys who are learning the profession. Whenever a shopkeeper loses his customers, or a poor man of letters wishes to gain as much money as will purchase an Abyssinian slave, he turns delyl. The profession is one of little repute; but many a prosperous Mekkawy has, at some period of his life, been a member of it."—vol. i. pp. 359, 360.

Burckhardt remained at Mekka a whole month after the conclusion of the hadj, at which time it appeared like a deserted town.

"Of its brilliant shops, one-fourth only remained; and in the streets, where a few weeks before it was necessary to force one's way through the crowd, not a single hadji was seen, except solitary beggars, who raised their plaintive voices towards the windows of the houses which they supposed to be still inhabited. Rubbish and filth covered all the streets, and nobody appeared disposed to remove it. The skirts of the town were crowded with the dead carcases of camels, the smell from which rendered the air, even in the midst of the town, offensive, and certainly contributed to the many diseases now prevalent."—vol. ii. p. 84.

That a semi-barbarous set of people should believe in the efficacy of this *hadj* is not in the least surprising—not half so much so as that in enlightened Germany at this hour there should be found believers, persons of high rank and station too, in the miraculous performances of Prince Hohenlohe; to say nothing of not a few besotted expectants, nearer home, of a young Shiloh from the rotten carcase of old Johanna Southcote. There is no rational account to be given as to the extent of human credulity; and we see no good reason why a Mussulman should not believe, as he is in duty bound to do, that Mahomet was conducted from Mekka to Jerusalem, and ascended from thence into the seventh heaven, under the guidance of Gabriel, and came back to his bed in the same night, as readily as a good Catholic believes, as his church demands, in the flight of the chapel of Loretto; or that the statues of saints and angels take a walk on particular occasions from one church to another, which every body knows frequently happens. At this moment there is a regular *hadj* performed every year by, on an average, some twelve or thirteen thousands of our own poor ignorant Irish peasantry to that scene of miserable imposture and quackery, in the north of their island, known by the name of St. Patrick's Purgatory; and as Mekka is visited by pilgrims from Morocco and Caubul, so is this Catholic Kaaba by true believers from the utmost recesses of Maryland.*

Mahomet disclaimed all power of performing miracles, and when taunted by the people of Mekka for not being able to do what Jesus, and Moses, and other prophets had done before

him, he told them that as men would not believe, nor be obedient after the miracles they had witnessed, God had given him the sword, that by it and his revelations mankind might be compelled to believe and obey; and sure enough by the sword and the Koran together, he and his successors have but too well succeeded in disseminating their false doctrines in Africa and Asia, where now may be counted, at the very least, one hundred millions of Mussulmans. The Arabians, before the time of Mahomet, were idolaters, and, like the other branch of Abraham, were led away to the worship of every object, animate or inanimate. Every house, every hill, and every valley, had their gods of sticks or stones, and so numerous were their objects of worship, that the Kaaba is reported to have contained three hundred and sixty idols, one for every day in the year, and that both men and women assembled to perform the ceremony of walking round it seven times, not clothed with the *ihram*, but in a state of perfect nudity, in order that their sins might be thrown off with their garments. The superstitious rites, therefore, that are now performed are few, if any of them, the invention of Mahomet; indeed, they bear the stamp of a far more remote antiquity. From the earliest periods of mankind to the present time, and throughout the whole of the eastern world, the odd numbers, and particularly that of seven, have been marked as potential for good or evil. The throwing off the garments, even to nakedness, was sometimes the symbol of penitence and sometimes of joy; in the ceremonies of the pilgrimage it would seem to indicate both; and we may perhaps consider the linen *ephod*, which David put on when he threw off his garments and danced before the ark, to be symbolic of the same intention as the *ihram* of the Mahomedans. The well of Zemzem is the spring of water which burst forth in the wilderness, at the moment when Hagar was witnessing her infant son Ishmael ready to perish of thirst; and the alternate running and walking between Szafa and Merua, sometimes running back and sometimes stopping, like one who has lost something, is supposed, according to Arab authorities mentioned by Sale, to represent Hagar seeking water for her unfortunate child. The rite of circumcision moreover does not belong to Mahomet; and it is remarkable enough, that as Isaac was circumcised on the eighth day, which the Jews still observe, Ishmael was thirteen years old when he was circumcised, and it is about this age that the Arabians still perform the rite.

Though Mahomet, while keeping up, in deference to popular prejudices, a modification of these silly and superstitious ceremonies, abolished idolatry—it was probably to constitute himself the only idol. The worship of images was, however, inconsistent with the grand principle of the new religion, which, says Gibbon, consisted of an eternal truth, and a necessary fiction. "There is no God but God, and Mahomet is the apostle of God." Though, under this character, he set up no pretensions to exhibit overt miracles, yet his fictions were of so bold a nature, that nothing but the most determined impudence, or the most ardent enthusiasm, could have ventured to utter them.

* See Sketches in the North of Ireland—an interesting volume, published some three or four years ago.

The most extraordinary part of his character is, that he could not write, nor, as it would appear from several passages in the Koran, read his own code of civil and religious ordinances, propounded for the future guidance of his countrymen. Gibbon calls him an "illiterate barbarian," but states, on the authority of Abulfeda, that he was an eloquent speaker, distinguished by the beauty of his person, and that before he spoke he was sure to engage on his side the affections of those he addressed. "They applauded his commanding presence, his majestic aspect, his piercing eye, his gracious smile, his flowing beard, his countenance that painted every sensation of the soul, and his gesture that enforced each expression of the tongue." Gibbon, indeed, who never loses an opportunity to launch a sarcasm at the Christian religion, treats that of Islam and its founder with great tenderness; "it is a creed too sublime for our present faculties;" "it is free from suspicion or ambiguity, and the Koran is a glorious testimony to the Unity of God." He finds an apology for all his lies and impostures,—for his fraud, perfidy, cruelty, and injustice,—because, "in the support of truth, the arts of fraud and fiction may be deemed less criminal." The excessive debaucheries and licentiousness of the false prophet are touched on with a delicate hand; "perfumes and women were the two sensual enjoyments which his nature required, and his religion did not forbid; and Mahomet affirmed that the fervour of his devotion was increased by these innocent pleasures."

Though Mahomet disclaimed the power of working miracles, to have produced such a work as the Koran, which for twelve hundred years has been established as a code for the religious, moral, and legal conduct and observance of a hundred millions of people, is itself a miracle; but Mahomet never pretended that he or any other mortal had the slightest concern in the composition of the Koran: on the contrary, he invariably asserted its divine origin, and that its precepts were communicated to him from time to time by the angel Gabriel, who received them from the hand of God, and that their object was to make perfect what had been but partially revealed by Moses and Christ. The story of the tame pigeon that was supposed to descend from heaven and whisper in his ear, is a pure fiction, first propagated by Grotius, in his "Truth of the Christian Religion," who, on being questioned by Pococke as to his authority, admitted that it rested on Christian, and not on Arab, authority. Gibbon could not suffer this to pass without a sarcasm, and has accordingly characterized it as a "pious lie." The suspension in the air of the coffin of Mahomet, Pitts declared, above a century ago, to be a "false story," and yet it has scarcely ceased to be considered popularly, if not a fact, at least what it is not, a Mahomedan fiction.

It has been supposed, however, that the angel Gabriel was neither more nor less than a mortal—either a learned Jew of the name of Abdallah Ebn Salam, or a Nestorian monk, named Sergius, or both. It must have been some one, at any rate, well acquainted with Jewish history, and with every part of the Old

and New Testament. Beautiful as the language may be, and this is admitted by every Arabic scholar; and sublime as are the sentiments and expressions applied to the majesty and attributes of the one God, the whole is as clumsy a composition as can well be imagined—a servile, mutilated, and vile plagiarism, from the Old and New Testaments, of which it is a mean parody rather than an imitation; a strange medley, where the sublime and the ludicrous are so closely huddled together, that before the reader has time for admiration of the one, he is disgusted with the meanness and absurdity of the other. Witness that pathetic story of Joseph and his brethren, so beautifully told in the holy Bible, and so garbled and perverted in the Koran as to excite only feelings of disgust.

Divested of its rubbish, the positive duties enjoined by the Koran may be considered to consist—first, in the belief of one eternal, self-created, omnipotent God, and of Mahomet his prophet; second, in the observance of prayer at stated times, with the necessary ablutions and purifications, which, however, strictly as they are ordered to be kept, are mostly impracticable in the deserts of Africa and Arabia; third, of the practice of alms-giving, which is observed more as a positive duty enjoined, than felt as an act of charity, and more out of ostentation, than as a relief to suffering humanity; for Mahomedans are well known to have little feeling for human misery, and are utterly regardless of human life. Ostentation in the giver is quite sure to create impudence in the beggar, several curious instances of which were observed by Burchhardt, and among others the following whimsical one:—

"While I was at Djidda, a Yemen beggar mounted the minaret daily, after mid-day prayer, and exclaimed loud enough to be heard through the whole bazar, 'I ask from God fifty dollars, a suit of clothes, and a copy of the Koran; O faithful, hear me, I ask of you fifty dollars,' &c. &c. This he repeated for several weeks, when at last a Turkish pilgrim, struck by the singularity of the beggar's appeal, desired him to take thirty dollars, and discontinue his cries, which reflected shame upon the charity of all the hadjis present. 'No,' said the beggar, 'I will not take them, because I am convinced that God will send me the whole of what I beg of him so earnestly.' After repeating his public supplication for some days more, the same hadji gave him the whole sum he asked for but without being thanked. I have heard people (he continues) exclaim in the mosques at Mekka, immediately after prayers, 'O brethren, O faithful, hear me! I ask twenty dollars from God, to pay for my passage home; twenty dollars only. You know that God is all bountiful, and may send me a hundred dollars; but it is twenty dollars only that I ask. Remember that charity is the sure road to paradise.' There can be no doubt that this practice is sometimes attended with success."—vol. i. p. 388.

The fourth precept is that of fasting, which with all their boasted observance, is, in reality, a mere pretence, and as little meritorious as the pretended fasting of the Catholics. The fifth command is the performance of a pilgrimage to

Mekka, which is incumbent on every good Muslim, though expensive to all that can afford it and attended with much suffering to the many thousands who cannot. Mr. Burckhardt says—

"The termination of the Hadj gives a very different appearance to the temple. Disease and mortality, which succeed to the fatigues endured on the journey, or are caused by the light covering of the ihram, the unhealthy lodgings at Mekka, the bad fare, and sometimes absolute want, fill the mosque with dead bodies, carried thither to receive the Imam's prayer, or with sick persons, many of whom, when their dissolution approaches, are brought to the colonnades, that they may either be cured by the sight of the Kaaba, or at least to have the satisfaction of expiring within the sacred enclosure. Poor hadjis, worn out with disease and hunger, are seen dragging their emaciated bodies along the columns; and when no longer able to stretch forth their hand to ask the passenger for charity, they place a bowl to receive alms near the mat on which they lay themselves. When they feel their last moments approaching, they cover themselves with their tattered garments; and often a whole day passes before it is discovered that they are dead. For a month subsequent to the conclusion of the Hadj, I found, almost every morning, corpses of pilgrims lying in the mosque; myself and a Greek hadji, whom accident had brought to the spot, once closed the eyes of a poor Moggrebyn pilgrim, who had crawled into the neighbourhood of the Kaaba, to breathe his last, as the Moslems say, 'in the arms of the prophet and of the guardian angels.' He intimated by signs his wish that we should sprinkle Zemzem water over him; and while we were doing so he expired: half an hour afterwards he was buried."—vol. i. pp. 293, 294.

The situation of Mekka is singularly unhappy, and ill adapted for the accommodation of the numerous votaries of Islam that flock thither to perform the rites of the pilgrimage. The town is built in a narrow valley, hemmed in by barren mountains; the water of the wells is bitter or brackish; no pastures for cattle are near it; no land fit for agriculture; and the only resource, from which its inhabitants derive their subsistence, is a little traffic, and the visits of the hadjis. Mr. Burckhardt estimates the population of the town and suburbs at twenty-five to thirty thousand stationary inhabitants, to which he adds three or four thousand Abyssinian and black slaves. There is a particular market, where these slaves are exhibited on stone benches; and Burckhardt observes, "as beauty is an universal attraction, these benches are always surrounded by hadjis, both old and young, who often pretend to bargain with the dealers, for the purpose of examining the slave-girls, during a few moments, in some adjoining apartment." It does not, indeed, appear that the sanctity of the place has contributed much to the morality of the inhabitants. Even "the holy Kaaba is rendered the scene of such indecencies and criminal acts, as cannot with propriety be more particularly noticed. The temple itself, the very sanctuary of the Mahomedan religion, is almost publicly and daily contaminated by practices

of the grossest depravity; the young of all classes are encouraged in them by the old, and even parents have been so base as to connive at them for the sake of money." Public women expose to sale corn and dhurra in the temple, which the pilgrims purchase to throw to the sacred pigeons, of which there are many thousands—this being a common mode of these ladies exhibiting themselves, and bargaining with the hadjis for something more than the corn."

Mr. Burckhardt proceeded from Mekka to Medina with a small caravan of hadjis. He found the country sandy and barren, little verdure occurring, except from the tamarisk, which grows luxuriantly in all sandy soils, and whose young leaves supply excellent food for camels. Every traveller, whether pilgrim or not, on entering Medina, must forthwith pay a visit to the great mosque and the tomb of Mahomed. The mosque is somewhat similar to, but smaller than that of Mekka, and is held in equal veneration. The most holy place is called El Rodha, where prayers and prostrations are performed by the visitors.

"The entrance to the Rodha, near Bab-es-Salâm, has a splendid appearance: the gaudy colours displayed on every side, the glazed columns, fine carpets, rich pavement, the gilt inscriptions on the wall to the south, and the glittering railings of the Hedjra* (or tomb of the prophet) in the back-ground, dazzle the sight at first; but, after a short pause, it becomes evident that this is a display of tinsel decoration, and not of real riches. When we recollect that this spot is one of the holiest of the Mahomedan world, and celebrated for its splendour, magnificence, and costly ornaments, and that it is decorated with the united pious donations of all the devotees of that religion, we are still more forcibly struck with its paltry appearance. It will bear no comparison with the shrine of the most insignificant saint in any Catholic church in Europe, and may serve as a convincing proof, that in pious gifts the Mahomedans have at no period equalled the Catholic devotees; without noticing many other circumstances, which help to strengthen the belief that, whatever may be their superstition and fanaticism, Mahomedans are never inclined to make as many pecuniary sacrifices for their religious establishments, as Catholics, and even Protestant Christians do for theirs."—vol. ii. pp. 177, 178.

At Mekka, ladies, of more respectable character than those who feed the pigeons, are constantly attending the mosque, but at Medina it is thought very indecorous for women to enter the holy temple.

"Even in their houses, the women seldom pray, except devout old ladies; and it is remarked as an extraordinary accomplishment in a woman, if she knows her prayers well, and has got by heart some chapters of the

* The veil of the tomb of Mahomet is sent annually from Constantinople, like that of the Kaaba at Mekka, which it resembles in substance and ornament. The old one is always sent back to the seraglio, and there used as palls and winding sheets for the princes of the Ottoman house.

Koran. Women being considered in the east as inferior creatures, to whom some learned commentators on the Koran deny even the entrance into Paradise, their husbands care little about their strict observance of religious rites, and many of them even dislike it, because it raises them nearer to a level with themselves; and it is remarked, that the woman makes a bad wife, who can once claim the respect to which she is entitled by the regular reading of prayers."—vol. ii. pp. 196, 197.

It is, however, a mistaken, though a very common notion, that Mahomedans do not admit of women having souls. The Koran sanctions no such opinion; but it does sanction the idea, that in their future, as in their present, state of existence, they are doomed to suffer degradation—the place assigned to the best of them being one of the lower mansions of Paradise; while their lords and masters are to enjoy a supreme state of felicity, in the society of black-eyed *houris*, made of pure musk, and dwelling in pavilions of pearls—"damsels of paradise, created," as the Koran says, "by a peculiar creation." The commentators say, however, that if a good Mussulman should express a wish to have his wife in those regions of Paradise where the *houris* dwell, a dispensing order will be given for her admission to these higher mansions.

Nothing, indeed, can more strongly mark the rude and barbarous state of moral feelings among the Mahomedans, than their conduct towards their females in this world, and their opinions as to their state in that which is to come. In Christian communities only have females found their proper level, and not always in these. It will generally be found, that in new societies, the superior strength and activity of man, where the exertion of both may be necessary, will give him a temporary ascendancy over women; and that it is only the scarcity of the latter in such situations—as in New South Wales, for instance—that has there placed them on their proper level. When Captain Beechey was at Pitcairn's Island, that old patriarch, Adams, would not permit his daughter, nor any of the females, to sit down at table, till the male company had finished their repasts; and the only reason he could assign for this was, that man was first created, and that woman was made out of his body as a *help*. This puts one in mind of those saucy *helps* in the United States of America, where all have the happiness of being independent of each other; even though there, from what is stated by Captain Basil Hall, and other travellers, one would almost conclude that the same kind of feeling predominates which actuated old Adams. They all remark on the absence of females at balls, races, fairs, and other places of amusement, whether public or private—or their forming, when present, distinct parties from the men. Captain Hall, indeed, states, in so many words, "that the women do not enjoy that station in society which has been allotted to them elsewhere;" the probable cause of which he endeavours to explain, by the propensity of the men for electioneering squabbles and *cheap* justice; perhaps, we may add, their avidity

for dram-drinking and chewing and smoking tobacco—pursuits and habits in which we will not pay the fair ladies of America so ill a compliment as to suppose them desirous of participating.

But we are digressing. The people of Medina, though a mixed race like those of Mekka, are much more rigid than them in the observance of their sacred rites. They have more gravity and austerity in their manners. The traveller is less infested by beggars, and his nose offended with fewer nuisances than in the streets of the former place; but Mr. Burckhardt saw little of them, having been seized with a fever a few days after his arrival. When sufficiently recovered he made the best of his way to Yembo, the seaport of Medina, with a view of crossing over to Egypt; but the soldiers and the lady of Mahomed Ali, and numerous Turkish *hadjis*, had engaged all the ships. This was the more unfortunate, as he soon discovered that the plague was raging in Yembo, though the Moslems said that was impossible, as "the Almighty had for ever excluded that disorder from the holy territory of the Hedjaz." No instance of this fateful disease had, in fact, been known in the Hedjaz within the memory of man. It had, on this occasion, been carried from Cairo to Suez, thence in some bales of cotton cloth to Djidda, and so on to Yembo. Forty or fifty persons were dying daily; a dreadful mortality in a population of only five or six thousand. The governor, it seems, took every precaution to prevent the extent of the evil from being known; but the howling lamentations of "La illaha ill' Allah!" which announce a Moslem funeral, struck the ear from every quarter, and forty-two of these were counted by our traveller in one day. That this horrible malady should spread its ravages far and wide among this infatuated people is not to be wondered at. "The women," says Burckhardt, "enter the apartments, embrace and console all the females of the family, and expose themselves every moment to infection. It is to this custom, more than to any other cause, that the rapid dissemination of the plague in Mahomedan houses must be ascribed; for, when the disease once breaks out in a family, it never fails of being transmitted to the whole neighbourhood;" and yet we have been told, and barefaced effrontery had made the tale believed in high quarters, that the plague is not infectious!

Burckhardt, however, had the good fortune to escape it, though obliged to remain in the midst of it for eighteen days, when at length he succeeded in getting a passage in a *sambouk*, or large open boat, to Cosseir; but having spent twenty days in reaching Sherm, at the entrance of the gulf of Akaba, he here hired camels for himself and servant, and in a few days reached a small village near Tor, called El Wady, consisting of a few houses surrounded with date-trees, and gardens well stocked with fruits of various kinds. Here he remained for some time, in the enjoyment of complete repose, good mountain air, and excellent water. After a fortnight's residence, this lamented traveller found his strength sufficiently recruited to enable him to proceed for

Cairo, which he reached on the seventh day from Tor.

We have little further to add on the subject of the Hadj; or of—

"The Arabian Prophet's native waste,
Where once his airy Helpers schemed and
plann'd,

Mid phantom lakes, bemocking thirsty men,
And stalking pillars built of fiery sand."

The humiliation of Mr. Canning's "maximus Othmannides" will go far, we think, to put an end to the follies and the vices, the habits of indolence and mendicity, which these pilgrimages to Mekka are calculated to encourage. The donations of the pilgrims were at one time alone sufficient to support the great number of eunuchs and other idlers attached to the mosque. When these began to fail, large sums in money and in corn were sent annually from Egypt, and still more from Constantinople; but we may conclude that the supplies from either of these quarters will in future be small indeed. Burckhardt says the tickets, entitling the bearers to annual life pensions from the Constantinopolitan *surras*, as they are called, were sold, when he was there, at two years and a half purchase, which spoke not much as to the opinion of the people of Mekka, even at that time, of the stability of the Turkish government. From Mahomed Ali of Egypt nothing has been received of late years, and probably never will be in future; he is well known to be an utter infidel. His resources, besides, just now, are otherwise employed, in the construction and repair of his fortifications, in training his army according to European tactics, and in augmenting his naval force. His whole conduct, indeed, sufficiently betrays his intention of endeavouring to establish an independent government in Egypt, to which, it is said, he calculates on being able to annex the Sultan's now loose and but nominal dependencies of Tripoli, Tunis, and Algiers—and probably also Morocco—in all which, we must say, we wish him success.

On the whole, notwithstanding all that Burckhardt records as to certain symptoms of enthusiasm in the course of his hadj, it is sufficiently plain that, even in the original sent of Mahommedanism, the religious feelings of the people have cooled down considerably. The educated Moslems every where are mostly of the sect of Mahomet Ali of Egypt; nor, however, we may question many of the details of Mr. Forster's work, can we have any doubt that all things are thus working together for the re-establishment of the true religion in the regions where man was first civilized, and where the oracles of God were uttered. In the meantime, the decline of the arch-heresy of the East will be regretted by no one who judges of the tree by the fruit. "A long residence," says Burckhardt, "among Turks, Syrians, and Egyptians" (and no man knew them better), "justifies me in declaring that they are wholly deficient in virtue, honour, and justice; that they have little true piety, and still less charity or forbearance; and that honesty is only to be found in their paupers or idiots."

From the Edinburgh Philosophical Journal.

ACCOUNT OF THE NUREMBURG BOY,
CASPER HAUSER, who was shut up in a
Dungeon from the fourth to the sixteenth
year of his age.

ABOUT twenty-five years ago public curiosity and the solicitude of the scientific world, were powerfully excited by the discovery of the wild man of Aveyron, who was surprised in the woods leaping from tree to tree, living, in a naked state, the life of a baboon rather than that of a man, emitting no other sounds than imitations of the cries of animals which he had heard, or those which made their escape from his breast without the emotions of pleasure or suffering. A phenomenon of nearly a similar nature has for the last fifteen months engaged the attention of the learned in Germany. But in this case there do not exist the entire liberty, and the wild and erratic life, which degraded the intellect of the unfortunate being just mentioned. There has, on the contrary, been a state of absolute constraint and captivity. Hitherto nothing had transpired in France respecting this singular phenomenon, and we should probably have still remained ignorant of it, had it not been for the attempt at assassination made a month ago upon this unfortunate creature, now restored to social life; and, as would appear, pursued by the same villain who, for twelve years, had kept him buried in a dungeon. A person of high rank, and distinguished by the superiority of his mind, has addressed to us the following letter, which reveals, in some measure, the entire history of this unfortunate being. Our correspondent has seen and conversed with this mysterious young man. We have thought it right to publish his letter in the same spirit which dictated it, that is to say, less as the recital of an extraordinary and touching adventure, than as a subject of moral and psychological study. At the moment when we were sending this letter to press, we received the *Nouvelle Revue Germanique*, which is printed at Strasburg, and in which the same facts are translated, from the *Hesperus*, one of the best of the German journals. But we have in addition, the assurance of authenticity and the observations made on the same subject by a person who, by profound study, has been familiarized with all the great questions of philosophy."

"TO THE EDITOR OF LE GLOBE.

Paris, November 15, 1829.

"Sir,—Within a few days the French journals speak, for the first time, of the history of a young man found at Nuremberg, whose name is Caspar Hauser. They speak of him in consequence of the assassination attempted upon his person in the course of last month, quoting the *Austrian Observer*, which has itself derived its information from German journals printed in countries nearer the place of the atrocity than Vienna. The story appears to them incredible, and with good reason, for what is true is not always probable. I have

* The letter is probably the production of the celebrated Cousin.

seen the young man in question, and am able to furnish authentic information respecting him. I am convinced you will judge it worthy of being made public.

"In the month of May, 1828, there was observed at the entrance of one of the gates of the city of Nuremberg, a young man who kept himself in a motionless attitude. He spoke not but wept, and held in his hand a letter addressed to an officer of the regiment of Light Horse, in garrison in the town. The letter announced that from the age of four to that of sixteen years, the bearer had remained shut up in a dungeon, that he had been baptized, that his name was Caspar Hauser, that he was destined to enter the regiment of Light Horse, and that it was for this reason that the officer was addressed.

"On being questioned he remained silent, and when further interrogated he wept. The word which he most frequently pronounced was *haam*; (the provincial pronunciation of *heim*, home,) to express the desire of returning to his dungeon.

"When it appeared evident from the state in which the young man was, that the statement contained in the letter was true, he was confided to the charge of an enlightened professor of the most respectable character, and, by a decree of the magistrates, was declared an adopted child of the city of Nuremberg.

"Previous to my return to France, I had determined to visit that city, the only large town in Germany which I had not seen. This was about the end of last September. I was furnished with a letter to one of the magistrates, who, from the nature of his functions, had the charge of superintending the education of Caspar Hauser. It was this person who brought him to me; and, by a privilege which I should not have ventured to claim, the last moments of a residence devoted to the examination of the curiosities of this great monument of the middle age, afforded me an opportunity of seeing a very rare, if not unique, subject for the study of human nature. We beheld a young man, below the middle stature, thick, and with broad shoulders. His physiognomy was mild and frank. Without being disagreeable, it was no way remarkable. His eyes announced weakness of sight, but his look, especially when a feeling of internal satisfaction or of gratitude made him raise it towards the skies, had a heavenly expression. He came up to us without embarrassment, and even with the confidence of candour. His carriage was modest. He was urged to speak, to give us an account of his emotions, of his observations upon himself, and of the happiness of his condition.

"We had no time to lose, for our horses were already harnessed. While I was reading an account composed by himself, in which he had begun to retrace his recollection, he related to my travelling companion whatever had not yet been recorded in it, or replied to his questions. I shall, therefore, first present the details of the narrative, and then mention what was repeated to me of a conversation of which I heard only a part.

"His manner of speaking and of pronouncing German was that of a foreigner, who has

exercised himself for some years in it. The motion of the muscles of the face indicated an effort, and was nearly such as is observed in deaf and dumb persons who have learned to speak. The style of the written narrative resembled that of a scholar of ten or eleven years, and consisted of short and simple phrases, without errors in orthography or grammar. The following is a brief account of it:—

"His recollections disclose to him a dark dungeon, about five feet long, four broad, and very low; a loaf of bread, a pitcher of water, a hole for his wants, straw for a bed, a covering, two wooden horses, a dog of the same material, and some ribbons, with which he amused himself in decorating them. He had no recollection of hunger, but he well remembered being thirsty. When he was thirsty he slept, and on awakening the pitcher was found full. When he was awake he dressed his horses with the ribbons, and when his thirst returned he slept. The man who took care of him always approached him from behind, so that he never saw his figure. He remained almost constantly seated. He recollects no feeling of uneasiness. He is ignorant how long this kind of life lasted; and when the man began to reveal himself and to speak to him, the sound of his voice became impressed upon his ear. His words are indelibly engraved upon his memory, and he has even retained his dialect. These words ran exclusively on fine horses, and latterly on his father, who had some, and would give them to him. One day, (I make use of this word although it is improper, for to him there were neither day, nor time, nor space,) the man placed upon his legs a stool with paper, and led his hand in order to make him trace some characters upon it. When the impulse given by the man's hand ceased, his hand also stopped. The man endeavoured to make him understand that he was to go on. The motion being without doubt inopportune, the man gave him a blow on the arm. This is the only feeling of pain which he remembers. But the stool greatly embarrassed him, for he had no idea of how he should put it aside, and was utterly unable to extricate himself from this prison within a prison. One day, at length, the man clothed him, (it would appear that he wore only a shirt, his feet being bare,) and taking him out of the dungeon put shoes upon him. He carried him at first, and then tried to make him learn to walk, directing the young man's feet with his own. Sometimes carried and sometimes pushed forwards, he at length made a few steps. But, after accomplishing ten or twelve, he suffered horribly, and fell a crying. The man then laid him on his face on the ground, and he slept. He is ignorant how long these alternations were renewed; but the ideas which he has since acquired have enabled him to discover, in the sound of his conductor's voice, an expression of trouble and anguish. The light of day caused him still greater sufferings. He retains no idea of his conductor's physiognomy, nor does he even know if he observed it; but the sound of his voice, he tells us, he could distinguish among a thousand.

"Here ends the narrative, and we now come

to the conversation. During the first days which he passed among men, he was in a state of continual suffering. He could bear no other food than bread. He was made to take chocolate: he felt it, he told us, to his fingers' ends. The light, the motion, the noise around him, (and curious persons were not wanting to produce the latter,) and the variety of objects which forced themselves upon his observation, caused an indescribable pain, a physical distemper, but this distemper must have existed in the chaos of his ideas. It was music that afforded him the first agreeable sensation: it was through its influence that he experienced a dispersion of this chaos. From this period he was enabled to perceive a commencement of order in the impressions by which he was assailed. His memory has become prodigious: he quickly learned to name and classify objects, to distinguish faces, and to attach to each the proper name which he heard pronounced. He has an ear for music, and an aptitude for drawing. At first he was fond of amusing himself with wooden horses, of which a present had been made to him, when he was heard continually to repeat the word horses, beautiful horses (*ress, echons res*). He instantly gave up, when his master made him understand that this was not proper, and that it was not beautiful. His taste for horses has since been replaced by a taste for study. He has begun the study of the Latin language, and by a natural spirit of imitation, his master being a literary man, he is desirous of following the same career.

"So extraordinary a phenomenon could not fail to inspire, independently of general curiosity, an interest of a higher order, whether in observing minds or in feeling hearts, and the women especially have expressed their feelings towards him in little presents, and letters of the most tender kind. But the multitude of idle visits they made to him, and especially these expressions of tender feeling, were productive of danger to him, and it became necessary to withdraw him from so many causes of distraction, and to lead him into retirement. Accordingly, he now lives retired in the bosom of a respectable family. Pure morals, an observing mind, and a psychological order, preside over his education and instruction, in proof of which, he has made immense progress in the space of the last sixteen months.

"Here, then, by the inexplicable eccentricity of a destiny without example, we have presented, and perhaps solved a problem, which from the Egyptian king mentioned by Herodotus, down to the writers of novels, to the Emilius of Rousseau, and the statue of Condillac, has exercised the imagination of men, and the meditations of philosophers. It is evident that in the profound darkness, the absolute vacuity in which Caspar Hauser was for twelve years immersed, all the impressions of the first four years of his life were effaced. Never was there a *tabula rasa* like that which his mind presented at the age of sixteen. You see what it has been capable of receiving. But the metaphor is false, for you see how it has reacted.

"In proportion as the sphere of his ideas en-

larged, he has made continual efforts to pierce the shades of his previous existence. They have been useless, at least as yet. "I incessantly try," said he to us, "to seize the image of the man; but I am then affected with dreadful headaches, and feel motions in my brain which frighten me." I have told you that his figure, his look, and his port, bore the expression of candour, carelessness and contentment. I asked him if he had, either in his dungeon, or after coming out of it, experienced feelings of anger. How could I, said he, when there has never been in me (and he pointed to his heart,) what men call anger. And this being from whom, since the commencement of his moral existence, had emanated all the gentle and benevolent affections, has all these illusions dissipated by the violence of an assassin. Happy, perhaps, had it been for him had he fallen under it, or should he yet fall! And yet, if, after having been struck by the murderer, he drags himself mechanically and squats in the corner of a cellar, as if he would again enter his cave, he who, in the first moment of his social existence, had no other wish than that of being led back to it, to see him now become a social man to such a degree, that his first cry is to supplicate that he be not again led to it!

"This assassin, I only know, as yourself and as the public know, through the medium of the newspapers. The young man, they say, thought he recognised in him the voice of his conductor. It is probable that the conductor is the assassin; but it is also possible that the young man may be deceived; for in that so well remembered voice, were concentrated all his ideas of evil. Be this as it may, it is as a psychological phenomenon that I have presented his history, and not as an adventure, respecting which every one may form his own conjectures. All that I can say is, that the functionary who presented him to us, and who, by the duties of his office, was charged with directing the inquiries, has informed me that for a moment they imagined they had found traces of a discovery; but these traces had ended in nothing else than the rendering it probable that the place of his imprisonment is to be found in a district at the distance of about ten leagues from the city of Nuremberg."—*Le Gobe*, 21st November.

From the Quarterly Journal of Science.

PRESERVATION OF FIREMEN EXPOSED TO FLAMES.

THE Chevalier Aldini of Milan has been earnestly occupied in the construction of an apparatus, or rather clothing, intended to preserve persons from injury who are exposed to flames. The apparatus has lately been fully tried at Geneva, and an account of it, and the trials, given in the *Bibliothèque Universelle*. A union of the powers possessed by a metallic tissue to intercept flame, with the incombustible and badly conducting properties of amianthus, or other substances, has been made in the apparatus; and the latter consists of two distinct systems of clothing, the one near the

body composed of the badly conducting combustible matter, and the other, or external envelop, of a metallic tissue.

The pieces of clothing for the body, arms, and legs, are made of strong cloth which has been soaked in a solution of alum; those for the head, the hands, and the feet, of cloth of asbestos. That for the head is a large cap, which entirely covers the whole to the neck, and has apertures in it for the eyes, nose, and mouth, these being guarded by a very fine copper-wire gauze. The stockings and cap are single, but the gloves are double, for the purpose of giving power of handling inflamed or incandescent bodies.

M. Aldini has, by perseverance, been able to spin and weave asbestos without previously mixing it with other fibrous substances: the action of steam is essential in the bending and twisting of it, otherwise the fibres break. The cloths prepared with it were not of close texture, but loose: the threads were about one-fiftieth of an inch in diameter, and of considerable strength: cords of any size or strength may be prepared from them. M. Aldini hopes to be able so to prepare other fibrous matters, as to be able to dispense altogether with this rare and costly material.

The metallic defence consists of five principal pieces: a casque, or cap complete, with a mask: this is of such size as to allow of sufficient space between it and the asbestos cap, and is guarded before the face by a visor, so that the protection is doubled in that part; a cuirass, with its brassets; a piece of armour for the waist and thighs; a pair of boots of double wire-gauze; and an oval shield, five feet long, and two and a half wide, formed by extending gauze over a thin frame of iron. The metallic gauze is of iron, and the intervals between the threads about one-twenty-fifth of an inch each.

When at Geneva, M. Aldini instructed the firemen in the defensive power of his arrangements, and then practised them, before he made the public experiments. He showed them that a finger enveloped first in asbestos, and then in a double case of wire gauze, might be held in the flame of a spirit-lamp or candle for a long time, before inconvenient heat was felt; and then clothing them, gradually accustomed them to the fiercest flames.

The following are some of the public trials made. A fireman having his hand inclosed in a double asbestos glove, and guarded in the palm by a piece of asbestos cloth, laid hold of a large piece of red hot iron, carried it slowly to the distance of 150 feet, then set straw on fire by it, and immediately brought it back to the furnace. The hand was not at all injured in the experiment.

The second experiment related to the defence of the head, the eyes, and the lungs. The fireman put on only the asbestos and wire gauze cap, and the cuirass, and held the shield before his breast. A fire of shavings was then lighted, and sustained in a very large raised chaffing dish, and the fireman approaching it, plunged his head into the middle of the flames, with his face towards the fuel, and in that way went several times round the chaffing-dish, and for a period above a minute in duration. The

experiment was made several times, and those who made it said they suffered no oppression or inconvenience in the act of respiration.

The third experiment was with the complete apparatus. Two rows of faggots, mingled with straw, were arranged vertically against bars of iron, so as to form a passage between, thirty feet long, and six feet wide. Four such arrangements were made, differing in the proportion of wood and straw, and one was with straw alone. Fire was then applied to one of these double piles; and a fireman, invested in the defensive clothing, and guarded by the shield, entered between the double hedge of flames, and traversed the alley several times. The flames rose ten feet in height, and joined over his head. Each passage was made slowly, and occupied from twelve to fifteen seconds; they were repeated six or eight times, and even oftener, in succession, and the firemen were exposed to the almost constant action of the flames for the period of a minute and a half, or two minutes, and even more.

When the course was made between the double range of faggots without straw, the fireman carried a kind of pannier on his back, prepared in such a way as to be fire-proof, in which was placed a child, with its head covered by an asbestos bonnet, and additionally protected by the wire gauze shield.

Four firemen made these experiments, and they agreed in saying, that they felt no difficulty in respiring. A very abundant perspiration came on in consequence of the high temperature to which they had been exposed, but no lesion of the skin took place except in one instance, where the man had neglected to secure his neck by fastening the asbestos mask to the body dress.

No one present could resist the striking evidence of defence afforded when they saw the armed man traversing the undulating flames, frequently hidden altogether from view by them as they gathered around him.

The fact that in M. Aldini's apparatus a man may respire in the middle of the flames is very remarkable. It has often been proved, by anatomical examination, that in cases of fire many persons have died altogether from lesions of the organs of respiration. It would appear that the triple metallic tissue takes so much of the caloric from the air as it passes to the lungs, as to render its temperature supportable; and it is known, by experiments in furnaces, that a man can respire air at 190 or 130° C. and even higher. Perhaps also the lesions referred to may have been due to aqueous vapour, which is often produced in great abundance in fires where endeavours are made to extinguish them by water, for such vapour would transfer far more heat to the lungs than mere air. Hence in every case, and however guarded, firemen should enter houses in flames with great prudence, because the circumstances are not the same as in the experiments just described.

It is remarked that several suits of this defensive clothing should be provided, not to clothe many persons at once, but that, in endeavouring to save persons or valuable things in cases of fire, the fireman should not ap-

proach again and again in heated clothing, but have a change at hand. The Grand Duke of Tuscany has ordered six suits for the city of Florence.

M. Aldini showed several experiments relative to the extinguishing power of his preparations before the Société de Physique de Genève. One consisted in placing an asbestos cloth of loose texture over a flame either of wax or alcohol; the flame was intercepted as well as it could have been by a piece of wire gauze. This experiment is supposed to favour the objections made to Sir H. Davy's explanation of the theory of the wire gauze safety-lamp; but there seems to be a mistake in the idea which has been taken of that theory. Sir H. Davy never explained the effect of his lamp by absorption of heat from flame dependant upon the good conducting power of the tissue alone, but by the joint action of absorption and radiation. There is no doubt that cloth of asbestos is an admirable radiator, and that this power, with its conduction, is probably sufficient to explain the effects upon Sir H. Davy's theory.

From the British Magazine.

REV. ISAAC TAYLOR.

THIS amiable man, and very useful writer, died December 12th, 1829, at Ongar, in Essex, in the 71st year of his age. For thirty-two years he had presided over the independent church and congregation of that place, and previously to his establishment there, he had sustained a similar charge at Colchester. Before his removal to Ongar, exertions were made to secure his pastoral service at Plaistow, in Essex; but from some cause or other, the negotiations for that purpose failed, and a conjunction of circumstances, which he ever regarded as providential, led to his final settlement amongst a people who have long manifested an affectionate attachment to him, and now sincerely lament the loss of their "guide, philosopher, and friend." No visitation of death has for many years occasioned such an excitement of feeling, in Ongar and its vicinity, as that which consigned the venerable Isaac Taylor to the silent tomb. When the melancholy intelligence was publicly announced, all seemed, more or less, personally affected by it; and all were prompt to shed blessings on his memory. At his burial, no fewer than thirty unfeigned mourners composed the funeral train, which was farther augmented by a very large crowd, of both townspeople and villagers, whom respect for the deceased had attracted to his obsequies. Numbers, too, of his congregation, testified their affectionate esteem, by instantly assuming the "sable garb of woe," or going into mourning, as it is termed, on his account. Though there was no reason to expect that the complaint, which at length terminated his existence, could be effectually counteracted or remedied, yet the blow of death was unlooked for at the time when it was given; as Mr. Taylor had walked about the town, and paid several casual visits on the day previous to that of his decease. His last public discourse was, we

learn, of a deeply interesting and affectionate character. It seemed almost like a prognostic of the event which shortly after removed the aged pilgrim of Christ to his everlasting rest. The lamp of his earthly affections burned brightly to the last, and was extinguished for a moment, only to be instantaneously relumed at the throne of the Eternal.

We regret our inability to furnish an accurate chronological sketch of those events in Mr. T.'s life, which may be termed the epochs of his existence. This may, however, be the less necessary, since, from his thoroughly domesticated character, his years generally passed away in undisturbed uniformity.

Mr. T., and nearly all his children, were accustomed to use the *burin* as well as the pen, and Boydell's fine illustrations of Holy Writ, consisting of a series of 100 copperplate engravings, were designed by his son Isaac, and executed (we believe entirely) by himself and family. Some of these plates have been considered, by competent judges, fully equal, both in design and workmanship, to many of Martin's most admired compositions. With respect to his domestic life, we learn, that he was a rigid economist of time, and quite an enthusiast in his love of order and punctuality. If five minutes ever elapsed between the proper period of dinner and that of its being ready, he would, on sitting down, say, "Now I have lost five minutes, and Mrs. Taylor has lost five minutes, and these (enumerating the rest of the family) have each lost five minutes; and, (supposing there were six in company) so we have lost a whole half hour by the want of punctuality." This way of calculating the time lost, used sometimes to astonish the poor cook, who did not altogether understand such nice computations. He was, we are told by a fair friend who was slightly acquainted with him, a "social and instructive companion: his conversation was habitually distinguished by the introduction of remarks of a useful tendency, containing much point, and expressed in his native simplicity of manner." He was ever a strong advocate for liberal and enlightened education; and being a great favourite of the young, he took advantage of his influence to press upon them the improvement of their minds, and the unceasing acquisition of knowledge. Nor did he confine himself merely to pointing out the road, and directing them to walk in it. He extended a helping hand to all who were willing to labour for themselves; and, indeed, stately devoted some hours to the instruction of a few young friends, in whose mental advancement he took a kind interest. This feature of his character is still further heightened by the fact, that "only a short time previous to his death, he commenced the delivery of a gratuitous course of philosophical lectures at his own house, to which he invited the attendance of his friends." There is something almost affecting in the consideration that, even at his advanced age, he lost not that eager desire to communicate knowledge, to quicken the germ of youthful thought, which had characterized him through life. It is rare to meet with so venerable a philosophical experimenter. But, indeed, it was essential to his happiness that he should be ever promoting the cause of practi-

cal usefulness. This was the end he ever kept in view, whether in the parlour or in the pulpit. His style of preaching was somewhat peculiar, and unadapted to what are termed popular audiences. He was an admirer of many of the old divines, and was quite willing to sacrifice the merit of elegance to that of impressive force. He hence exhibited a quaint and sententious kind of diction, in which, however, was embraced much solid and valuable thought. He was very figurative, though by no means florid. He drew his illustrations "from the most simple images in nature, and the most familiar occurrences in human life."

Any father would have derived honour from the eminence of two such writers as Jane Taylor* and Isaac Taylor, junior. But Mr. T. may stand on his own merits as an author, and claim, at least, an eulogium which it would be happy for the world if many writers of more splendid talents were ambitious to deserve. He set all the energies of his soul at work to do good, and appears never to have written a page in which he lost sight of that object. This is praise indeed, which the ladylike array of fine words, and the *bijouterie* of spangled sentences were well neglected to attain. We are far from saying that he could not write with elegance, for he often, indisputably, did; but this is by no means the general characteristic of his style, which is plain, homely, and colloquial, though constantly bestudded with well-conceived metaphors, gushing up like fantasti-

* The writer of this notice hopes to be pardoned, for a brief digression relative to Miss J. Taylor, which may be interesting, at least, to some readers. He was residing, a few years back, for a short time at Olney, in Buckinghamshire, and in the course of a ramble one afternoon, through Weston Park, he at length reached the recess, now universally named "Cowper's Alcove;" which, with the beautiful avenue opposite to it in the distance, that poet so charmingly describes in his "Task." Before sitting down, the writer's eye happened to glance upon the back of the seat, where it has become customary for visitors to inscribe their names, and his delight at noticing the following couplet, in pencil, may be easily imagined by all who are admirers of Miss T.'s writings:

Where Cowper wrote, what feeble hand shall try?—

Yet to his lov'd remains we breathe a sigh.

Jane Taylor, Ongar.

There was considerable pleasure in the thought, that a kindred spirit to Cowper's had been here to muse over his memory. These two celebrated writers had much in common. They were both keen satirists, but their manner was different. The lady abounded in laughing railery, and she rather aimed at particular points of character; he, too, exhibited much gaiety, but not in his satire, which was mostly directed against general principles. This is not, however, the place (even if it were necessary) to balance their respective merits. If it be said, that Jane Taylor could not have written "The Task," the counterpart of this assertion may incontrovertibly be, that Cowper could never have produced "Display."

cal brooks amid tracts of useful arable land, in places where one would not expect to find them. He stops not at the most whimsical and ludicrous expressions for his ideas, if he can thereby give force to his meaning. After delineating, in his valuable work, "Self Cultivation recommended;" the features of an indolent and careless mind, he says, "A lost character this. Intellectuality is frozen up. The mind dozes and snores, or if at all aroused, it is to set itself a-kimbo against instruction, and, finally, to resist and resent every attempt to communicate useful or honourable emulation." Many similar quaintnesses are to be found both in the work just quoted and in its companion, "Advice to the Teens." We mention them to illustrate the original character of the man; by no means to depreciate the sterling excellence of his little volumes. He was evidently, from the minutiae of particulars which his preceptive instructions comprehend, a very acute observer of human life. It is not asserted that he made any new discoveries; but he obtained a clearer view than many others of the innumerable causes which tend to modify and to form the character; and there are few of these influences which he has not enumerated in the above mentioned works. He wrote, besides, several small volumes, entitled, "Scenes in all the Four Quarters of the Globe, intended for little tarry-at-home Travellers;" these are of course intended merely for children. They are lively and attractive. Mr. T.'s works exclusively on theological topics were very few. The only one to which our memory instantaneously refers us, is, "The Balance of Criminality," in which the subject of the guilt incurred by spiritual unbelief is investigated.

From the British Magazine.

HYMN.

Our God, our Father, hear.

BY THOMAS PRINGLE.

WHEN morn awakes our hearts,
To pour the matin prayer;
When toil-worn day departs,
And gives a pause to care;
When those our souls love best
Kneel with us, in thy fear,
To ask thy peace and rest—
Our God, our Father, hear!

When worldly snares without,
And evil thoughts within,
Of grace would raise a doubt,
Or lure us back to sin;
When human strength proves frail,
And will but half sincere:
When faith begins to fail—
Our God, our Father, hear!

When in our cup of mirth
The drop of trembling falls,
And the frail props of earth
Are crumbling round our walls:
When back we gaze with grief,
And forward glance with fear;
When faith man's relief—
Our God, our Father, hear!

And when Death's awful hand
Unbars the gates of Time,
Eternity's dim land
Disclosing, dread, sublime;
When flesh and spirit quake
Before THEE to appear—
Oh, then, for Jesus' sake,
Our God, our Father, hear!

From the Monthly Review.

COTTAGE POETRY.*

WE like the idea of Cottage Poetry, and it is a kind and benevolent heart only which could have thought of such a title, or written poetry of such a character. The little cheap collection before us has also many of the characteristics which render simple, pastoral poetry agreeable, and several of the pieces might be said to deserve a better place, could they have a better than one in which they are to be found by men of pure and humble minds. The following lines will show how gently our cottage poet plays his oaten pipe.

"The labours of the early day
With richest gain my toil repay;
Both health and appetite I feel,
Best sweeteners of the frugal meal:
With strength restored, I then renew
My duties and my pleasures too:
That duties pleasures are to me,
How grateful, Lord, I ought to be!

"What pure delight, what treasures yield
The grove, the garden, and the field!
The birds that hail the break of day,
The fragrance of the new mown hay,
The beauties of the varied flowers,
Shining o'er all the beds and bowers,
All tend to raise my thoughts to Thee:
How grateful, Lord, I ought to be!

"And when my daily task is done,
While gazing on the setting Sun,
As its mild radiance fades away,
Hope lingers on its parting ray:
Hope and reliance that to cheer
From day to day, from year to year,
The morrow shall its rising see;
How grateful, Lord, I ought to be!

"O, may I not presumptuous seem,
Attempting too sublime a theme,
But may I, like the obedient Sun,
My earthly course of duty done,
Sink gently into life's decline,
And every thought be wholly thine!
That I dare hope to rise with Thee,
How grateful, Lord, I ought to be!

* By the Author of "Old Friends in a New Dress." To which is added, a Supplement to "Old Friends in a New Dress," containing twelve additional fables. London:—Smith, Elder, and Co. 1829.

Museum.—VOL. XVI.

From Blackwood's Magazine.

ONCE UPON A TIME.

SUNNY locks of brightest hue
Once around my temples grew,—
Laugh not, Lady! for 'tis true;
Laugh not, Lady! for with these
Time may deal despitefully;
Time, if long he lead thee here,
May subdue that mirthful cheer;
Round those laughing lips and eyes
Time may write sad histories;
Deep indent that even brow,
Change those locks, so sunny now,
To as dark and dull a shade,
As on mine his touch hath laid.

Lady! yes, these locks of mine
Cluster'd once, with golden shine,
Temples, neck, and shoulders round,
Richly gushing if unbound,
If from band and bodkin free,
Half way downward to the knee.
Some there were took fond delight,
Sporting with those tresses bright,
To enring with living gold
Fingers now beneath the mould,
(Wo is me!) grown icy cold.

One dear hand hath smooth'd them too,
Since they lost the sunny hue,
Since their bright abundance fell
Under the destroying spell.
One dear hand! the tenderest
Ever nurse-child rock'd to rest,
Ever wiped away its tears.
Even those of later years
From a cheek untimely hollow,
Bitter drops that still may follow,
Where's the hand will wipe away?
Here I kiss'd—(Ah! dismal day,)
Pale as on the shroud it lay.
Then, methought, youth's latest gleam
Departed from me like a dream—
Still, though lost their sunny tone,
Glossy brown these tresses shone,
Here and there, in wave and ring
Golden threads still glittering;
And (from band and bodkin free)
Still they flow'd luxuriantly.

Careful days, and wakeful nights,
Early trench'd on young delights.
Then of ills, an endless train,
Wasting languor, wearying pain,
Fev'rish thought that racks the brain,
Crowding all on summer's prime,
Made me old before my time.

So a dull, unlovely hue
O'er the sunny tresses grew,
Thinn'd their rich abundance too,
Not a thread of golden light,
In the sunshine glancing bright.

Now again, a shining streak
Gins the dusky cloud to break;—
Here and there a glittering thread
Lights the ringlets, dark and dead,—
Glittering light!—but pale and cold—
Glittering thread!—but not of gold.

Silent warning! silvery streak!
Not unheeded dost thou speak.

No. 94.—2 I

Not with feelings light and vain—
 Not with fond regretful pain,
 Look I on the token sent
 To announce the day far spent;—
 Dark and troubled hath it been—
 Sore misused! and yet between
 Gracious gleams of peace and grace
 Shining from a better place.

Brighten—brighten, blessed light!
 Fast approach the shades of night,—
 When they quite enclose me round,
 May my lamp be burning found!

C.

Miscellany.

[The following description of a storm at sea, near the place where the *Hornet* was lost, is from the United Service Journal.]

The weather continued fine, and all was as favourable as could be wished, until we had reached the parallel of the Bermudas a little to the north-east, where we encountered a furious hurricane. The season of these, so often fatal to ships in this latitude, had now arrived, and the squally, lowering weather, the harbingers which generally precede them, had prevailed for some days; but on the evening of the eventful night which ushered in the presiding demon of the storm, appearances had become so much more threatening, that by signal from the Commodore's ship, the whole fleet was ordered to make all the extraordinary preparations usual on such occasions. Every ship through the dim obscure of a murky atmosphere, might be seen reefing, furling, striking top-gallant yards and masts, and taking all the precautions which prudence, aided by experience, could dictate, and which the moment seemed to demand. On board our own ship, every thing was furled, save the main-top-sail, close reefed and the main and fore stay-sails. The wind at sunset blew hard in squalls from the south-west, and the weather was thick, hazy and rainy. About midnight, however, just as the middle watch had relieved the deck, the wind suddenly lulled; the dense mass of dark lowering clouds, which had so long obscured the face of the heavens, broke; the moon, about the full, shone forth in all her brilliancy, and we began to flatter ourselves we had for once been agreeably deceived.

While thus congratulating each other on the favourable change, full of pleasing anticipations of the prosperous termination of the voyage, and a speedy sight of the white cliffs of our native land—how many, alas! with thoughts, perhaps, thus occupied, in one short hour, were to be hurried "to that bourne from whence no traveller returns," and to close their mortal voyage in the gulf which even then was yawning to receive them—a little after 1 A.M. the wind, which as I remarked before was from the southward, and had considerably moderated, suddenly flew round to the north-west, and with one tremendous gust, or rather explosion, which nothing could resist, tore the sails from the yards, and threw the ship with a dreadful crash on her beam-ends; even the furled sails were split to tatters, and the close reefed main-top-sail blown like a rag out of the bolt rope:

to this we probably owed the preservation of the ship and our lives; a stouter sail might have involved the loss of the masts, or capsized the ship; as it was, we were for some time in a critical situation. The ship on her side, the crew hanging on by the weather gunwales and rigging, unable to move, so as to sound the pumps, or take any measure for her preservation; the sea, one vast expanse of foam, from which a constant spray, like driving sleet, continually drifted over the bulwarks, had all the appearance of a mountainous desert covered with snow; whilst those portentous meteors of the storm, regarded by seamen with such superstitious awe, gleamed high aloft with a lurid light, and seemed to hover about the mast-heads of the vessel. Never have I since experienced such a night; it seemed as if the reign of chaos was once more at hand, and the conflicting elements in the last throes of a general dissolution.

The crisis at length passed, about 4 A.M. it moderated, and the ship resumed gradually a more erect position. Eagerly was the first moment seized to sound the pumps, having every reason to fear, from the shock and heavy straining received from the first fury of the blast, that she had sprung a leak: this, however, was not the case; being nearly a new and remarkably stout-built ship, she weathered it nobly, and suffered but little in comparison with the greater part of her consorts. Some of these foundered during the night, and among the rest the ill-fated *Calypso*, which, run on board by a merchant ship called the *Dale*, went down with a crew of one hundred and twenty souls, all of whom perished.

Daylight made us better acquainted with the disastrous effects of the tempest. Out of a fleet of fifty sail in company the evening before, not more than fifteen or twenty were now to be seen, most of which had suffered more or less. Here was to be seen a hulk with not a spar standing; there, another with only her lower-masts. The Commodore's ship, the *Goliath*, of the line, was seen in the distance, with all her top-masts gone: she, among the rest, experienced a very narrow escape, having been thrown on her beam-ends by the fatal puff, and rescued from an imminently perilous condition by these giving way.

Bibliophiles.—In the year 1890, the recent establishment of the Roxburghe Club in England led to the formation of a similar body in Paris, under the title of *Société des Bibliophiles Français*; the principal object of which was to publish works yet in manuscript, or to reprint works of great rarity. The Society consists of twenty-four members, besides five foreign associates. The collection which is published at the expense, and under the superintendence of the Society, bears the general name of *Mélanges*. Every piece which enters into the composition of a volume is printed separately, on paper expressly fabricated for the purpose, and with Didot's best types; and has a distinct paging and a separate title. Every volume of the collection is marked with the year in which it was printed, and contains a general title, a table of contents, and a list of the Society. Every copy bears the number and the name of

the member of the Society to whom it belongs. Twenty-four copies are struck off for the members of the Society; a twenty-fifth is deposited in the Bibliothèque du Roi, and one copy is allotted to each foreign associate. Every such copy which may be exposed to public sale, is to be immediately subjected to a bidding, in the name of the Society, of a hundred francs.

Constantinople.—This celebrated metropolis, the *Anthusa*, or blooming maiden, of the Greeks, and the *Ummudunja*, or mother of the universe, as it is styled by the Turks, has been visited with the horrors of nine and twenty sieges. The subsequent enumeration of their successive occurrence, cannot fail to possess something more than a transient interest in the eyes of our readers.

B. C. 477. Besieged by Pausanias after the battle of Plataea.

410. By Alcibiades, in the beginning of the fifth century, anno 410 or 411.

347. By Leo, Philip's general.

A. D. 197. By the Emperor Septimius Severus.

313. By Maximus Cæsar.

315. By Constantine the Great.

616. By Choroës of Persia, under Heraclius, Emperor of the East.

626. By the Chaghan of the Avari, an ally of Choroës.

656. By Moawia, the general of Ali, an Arab sovereign.

669. By Iesid, a son of Moawia.

674. By Sofian Ben-Auf, one of Moawia's generals.

719. By two sons of Caliph Merwan, when Anthemios was emperor.

744. By Solymán, a son of Caliph Abdolmelek.

764. By Paganos, the kral of the Bulgarians, under Constantine V.

786. By Harun-al-Rashid, under Leo IV.

798. By Abdolmelek, a general of Harun-al-Rashid.

811. By Krumus, the despot of the Slavonians.

820. By Thomas, the Slavonian, under Michael the Stammerer.

886. By the Russians, under Ascold and Dir.

914. By Simeon, kral of the Bulgarians.

1048. By Tornicius, the rebel, under Michael Monomachos.

1081. By Alexius Comnenus, on Good Friday.

1204. By the Crusaders, on the 12th of April.

1261. By Michael Palæologus, on the 25th of July.

1396. By Bajazet, the lightning-flash. The first Ottoman siege.

1402. By the same.

1414. By Musa, a son of Bajazet.

1422. By Amurath II. a son of Mahomet I.

1453, 25th of May. By Mahomet II. "the

conqueror of Constantinople," against whose victorious host, Phranza tells us, Constantine Dragofes Palæologus, the last Greek emperor, rushed forth, exclaiming, "I would rather die than live;" and shortly afterwards, perceiving himself deserted by his recreant followers, and crying aloud, "Is there no Christian

hand to smite off my aching head?" met a glorious death, though doomed to fall by the cimeter of an infidel.

Fresh Water Springs at the Bottom of the Sea.—These springs occur near the islands of Bahrain and Arad, which are situated on the south side of the Persian Gulf. Bahrain is low and more fertile than any island in that gulf. Many fine groves of date trees are scattered over it, and perhaps the purest fresh water is to be found at a large pool having a spring near it, within two or three miles of the town of Monama. When Captain Maughan left Bahrain in 1828, the island was in the possession of the Ootobies, a powerful tribe of Arabs from the desert opposite. About one and a half or two miles to the north-east lies the little island of Arad, merely a low sandy islet, with a few date trees upon it, and a hamlet composed chiefly of fishermen's huts. The harbour for shipping is formed between Bahrain and Arad islands, from which project extensive reefs of rocks. The depth of the harbour is from three to four and a half fathoms, with a sandy bottom. On the western and north sides of Arad, at some distance from the beach, are springs of fresh water gushing from the submarine rocks, where the salt water flows over them at the depth of a fathom or two, according to the state of the tides. Some of the fresh water springs are close by the beach, and here the fishermen fill their jars or tanks without difficulty, but many of the springs are distant from the shore; and whenever the fishermen on the bank near them require water, they bring their boat close over the spring, and one of the crew dives under the surface of the salt water with a leathern *mussuck*, or tanned skin of a goat or sheep, and places the neck or mouth of it over the spring. The force of the spring immediately fills the bag with fresh water, and the man ascends without difficulty to the surface, and empties his cargo into a tank, and he descends continually to replenish his *mussuck*, until the tank be filled. Captain Maughan was told that some of the springs are in three fathoms water. The *mussuck* they use may contain from four to five gallons; the people who generally fish about these islands are pearl divers, accustomed to dive in twelve and fourteen fathoms water for pearls. They are a quiet, and, if not molested, a harmless race of Arabs; during the summer they wear but little clothing. There are also springs of fresh water under the sea near the north-eastern part of Bahrain island. From all that Captain Maughan could learn, above thirty springs of fresh water have been discovered in the sea in the neighbourhood of Bahrain and Arad.

The sandy beaches of the neighbourhood are composed of the usual sea-sand, chiefly composed of broken corallines and shells. The nearest highland is the coast of Persia opposite, about Cape Verdistan, Kongoon, Assilco, &c.; and it is composed chiefly of sandstone, black coarse marble, and gypsum. The vegetation is scanty, merely a few shrubs, mostly a species of balsam, skirting the sides of the mountains. The land about El Katiff on the main, twenty miles further to the westward of Bah-

rain, is of moderate height, and not of any considerable extent. All the coast to the eastward of Bahrain is very low and sandy, until it joins the mountains over Cape Mussendoun.

On the Lofty Flight of the Condor.—Next to the Condor, the Lammmergeier of Switzerland and the Falco destructor of Daudin, which is probably the same as the Falco Harpya of Linnaeus, are the largest flying birds.

The region which may be considered as the habitual abode of the Condor, begins at a height equal to that of Etna, and comprehends strata of air at an elevation of from 9600 to 18,000 feet above the level of the sea. The largest individuals that are met with in the chain of the Andes of Quito, are about fourteen feet from the tip of one wing to that of the other, and the smallest only eight. From these dimensions, and from the visual angle under which this bird sometimes appears perpendicularly above our heads, it may be judged to what a prodigious height it rises when the sky is clear. When seen, for example, under an angle of four minutes, it must be at a perpendicular distance of 6876 feet. The Cavo of Antisana, situated opposite the mountain of Chussulongo, and from which we measured the bird soaring, is situated at a height of 12,958 feet above the level of the Pacific Ocean. Thus, the absolute height which the Condor attained, was 20,834 feet, an elevation at which the barometer scarcely rises to 12 inches. It is a somewhat remarkable physiological phenomenon, that this bird, which for hours continues to fly about in regions where the air is so rarefied, all at once descends to the edge of the sea, as along the western slope of the volcano of Pichincha, and thus in a few minutes passes as it were through all the varieties of climate. At a height of 20,000 feet, the air-cells of the Condor which are filled in the lowest regions, must be inflated in an extraordinary manner. Sixty years ago, Ulloa expressed his astonishment at the circumstance that the vulture of the Andes could fly at a height where the mean pressure of the air is only 14 inches.* It was then imagined, from the analogy of experiments made with the pneumatic machine, that no animal could live in so rare a medium. I have seen the barometer fall on Chimborazo to 13 inches 11 2-10ths lines. My friend, M. Gay Lussac, respired for a quarter of an hour in an atmosphere whose pressure was only 0m.3258. At heights like these, man in general finds himself reduced to a most painful state of debility. In the Condor, on the contrary, the act of respiration appears to be performed with equal ease, in mediums where the pressure differs from 12 to 30 inches. Of all living beings, it is without doubt the one that can rise at will to the greatest distance from the earth's surface. I say, at will, because small insects are carried still higher by ascending currents. Probably the height which the Condor attains is greater than that which we have found by the calculation mentioned above. I remember

that on Cotopaxi, in the plain of Sonigusion, covered with pumice, and elevated 13,578 feet above the level of the sea, I perceived that bird at such a height, that it appeared like a black dot. What is the smallest angle under which objects weakly lighted are distinguished? The diminution which the rays of light undergo by passing through the strata of the atmosphere, has a great influence upon the minimum of the angle. The transparency of the air of mountains is so great under the equator, that, in the provinces of Quito, as I have elsewhere shown,† the poncho or white mantle of a person on horseback is distinguishable at a horizontal distance of 84,032 feet, and consequently under an angle of 13 seconds.—Humboldt, *Tableaux de la Nature*, t. ii. pp. 72—78.

Humming-Bird and Insects at a great height on the Volcano of Orizaba.—Schiede and Deppe, on their ascent of Orizaba, observed, at a height of 10,000 feet above the sea, the Humming Bird (*Trochilus*) flying round the orange-coloured flowers of the Castilligen. At a height between 14,000 and 15,000 feet, on the same mountain, above the region of grasses, &c. they found, under a block of porphyry, many moths, some dead, others alive, which appear to have been carried upwards into this snowy region by an ascending current of air. In the same dreary region, a live species of beetle was found, which, from its nature, must be considered a native of this lofty situation.

Species of Mussel exclusively employed as Bait in the New Foundland Cod Fishery.—The utility of the inhabitants of shells (shell-fish) to mankind is well known. The following fact, as it is connected with an important branch of commerce, is a further proof of the value of these animals in an economical point of view. It was communicated to M. Sander Rang by Bellanger, the captain of a French frigate, and is inserted in Rang's valuable work on the Mollusca. The captain, endeavouring to ascertain how it happened that the French cod-fishers on the banks of Newfoundland were not so successful as the Americans, discovered that it was owing to these latter employing, as a bait, the animal of a species of mya (mussel), which abounds on several parts of the American coast; and he was the more confirmed in the truth of this fact, by observing that the French fishers, towards the conclusion of the season, purchased from the Americans the remaining portions of their bait, in order that they might the more speedily complete their cargo. Bellanger, who is well versed in conchology, examined this mya very carefully,

* It is probably one minute. In 1806, a balloon, which was four fathoms in diameter, was seen with the naked eye at Berlin to fall at a distance of 40,200 feet. It was then under a visual angle of 2' 4". But it could have been distinguished at a much greater distance, notwithstanding the constitution of our northern atmosphere.

† In my memoir on the diminution of heat, and on the lower limit of perpetual snow.

* Astronomical Observations made by order of the King of Spain, p. 109.

and found that it was a species met with abundantly on the coasts of the French channel. To our readers interested in the kinds of bait used in the Newfoundland fishery, we recommend the perusal of Mr. Cermack's valuable communication, vol. i. of the new series of this Journal.—*Edin. Phi. Jour.*

Oak Trees liable to be Struck by Lightning.

—In Denmark, where there are considerable tracts covered with oak and beech-trees, it is remarked, that the oaks are struck with lightning twenty times for once the beeches are struck. It is conjectured by some observers, that this circumstance is to be traced to the forms of the two species of trees.

Potato at a great height on the Mountain Orizaba.

—MM. Schieds and Deppe, in a letter to Baron A. Humboldt, giving an account of their ascent of the great volcano of Orizaba in Mexico, mention that they found the potato in a wild state, at the height of 10,000 feet above the level of the sea. It was about 3½ inches high, with large blue flowers, and tubers or potatoes the size of a hazel-nut.

Method of detecting the Adulteration of Tea.

—The Chinese frequently mix the leaves of other shrubs with those of the tea-plant; this fraud is easily discovered by adding to an infusion of it a grain and a half of sulphate of iron. If it is true green tea, the solution placed between the eye and the light assumes a pale bluish tint; if it is *bokea tea*, the solution is blue, inclining to black, but if it is adulterated, it shows all the colours, yellow, green, and black.—*Desmarcet's Chemie Recreative.*

On the different colours of the Eggs of Birds.

—It is a remarkable circumstance that the birds whose nests and eggs are more exposed to the view of their enemies than those of other animals, lay eggs, the colour of which is scarcely distinguishable from that of surrounding objects, by which the eye of rapacious birds or other animals is deceived; while the birds, whose eggs are of a bright colour, and consequently capable of attracting notice, conceal their nests in hollow trees or elsewhere, or leave their eggs only at night, or continue to sit upon them from the period of parturition. It is to be observed also, that in the species whose nest is exposed, and in which the females take charge of the eggs, without the males troubling themselves about them, these females are commonly of a different colour from the males, and more in harmony with the tints of surrounding objects.

Nature, says M. Gloger, has therefore provided for the preservation of the species whose nest is exposed to the view, by giving their eggs a colour incapable of revealing their presence at a distance, while she has been able, without inconvenience, to give the most lively colours in those cases where the eggs are concealed from sight. It would have been more correct to say, that a certain number of birds can deposit their eggs in places accessible to

the view, because the colour which their eggs have renders them liable to be confounded with surrounding objects; while other birds have been obliged to conceal their eggs because the brightness of their colours would attract their enemies. But in whatever way it may be accounted for, the fact exists, and the author, who in his memoir has taken a view of all the birds of Germany, has convinced himself of it.*

Eggs may be distributed into two series, according as their colour is simple or mixed. The simple colours, such as white, blue, green, and yellow, are the brightest, and consequently the most dangerous for the eggs.

1. *Pure White*—the most treacherous of all colours, occurs in the birds which nestle in holes, as the woodpeckers, wrynecks, rollers, bee-eaters, king-fishers, snow-buntings, robins, water-ouzes, swallows and swifts. It is only in these species that the eggs are of a shining white.

The eggs are also white in some species which, like the house swallow, certain titmice, the wren, &c., construct nests, whose aperture is so narrow that their enemies cannot see into them.

White eggs also occur in species which leave them only at night, or at least very little during the day; of which kind are owls and hawks.

Lastly, this colour is met with in those which lay only one or two eggs, and which sit upon them immediately after; as pigeons, boobies, and petrels.

2. The *pale green or pale blue* colour is found to be peculiar to the eggs of many species which make their nest in holes, as starlings, saxiscols, fly-catchers, &c.

In the second place, this colour is common to the eggs of birds whose nests are constructed with green moss, or at least placed among grass, but always well concealed; for example, the hedge-sparrow and blue throated warbler.

Lastly, green eggs are met with in several large species capable of defending themselves against the attacks of enemies, such as herons.

3. A slight green colour is observed upon the eggs of several gallinaceous birds which lay among grass, without making a regular nest, and which is presently concealed by the great quantity of eggs which they lay; as in the partridge and pheasant.

The same colour is also observed in many web-footed birds, which cover their eggs when they leave them, and which are moreover careful to look after them; as swans, geese, ducks, divers, &c. The eggs of certain large birds which nestle in the open air, are even of a muddy white, as is observed in vultures, eagles, and storks.

Among the party-coloured eggs, there are distinguished those which have a white ground, and those whose ground is of some other colour than white. The eggs which have a

* The memoir, entitled "Über die Farben der Eier der Vogel von Herr C. Gloger," is inserted in Erster Band, des Stück of the Verhandlungen der Gesell. Naturf. Freunde zu Berlin, 1829.

white ground are those of the golden oriole, the long-tailed titmouse, the nut-hatch, creeper, chimney-swallow, &c. Most of their eggs are concealed in nests that are well covered. The partly-coloured eggs, whose ground is not white, at least not pure white, are those of the lark, titlark, some wagtails and buntings; those of crows, shrikes, thrushes, quails, and most of the singing birds, in which the colour of the interior of the nest accords with that of the eggs.

Culture of the Vine at Mexico.—The Botanic Garden of Geneva possesses a collection of more than 600 varieties of vines, collected from different vineyards in France, Switzerland and Italy. In the month of November, 1837, a selection of the best varieties was sent to Mr. L. Alaman, one of the principal proprietors in the Mexican United States. He planted them on his lands in the state of Guanajuato, and writes that a hundred and five stocks are in full vegetation. He adds, that on the elevated plain of Mexico, the same inconvenience is not experienced in the cultivation of the vine which arrests its cultivation at Cayenne, and in several parts of the United States: namely, that the grapes of the same cluster ripen unequally. At Mexico, they ripen together as in Europe, and it is to be presumed, that this cultivation, which was formerly prohibited by the Spanish Government, might be established there, the climate resembling that of Murcia or Rome. If these hopes are realized, it will be curious that the Botanic Garden of Geneva should have been the means of furnishing these plants to South America. It will be recollected that it was the Paris garden that supplied Martinique with the coffee plants, from which originated all the coffee plantations in America; and that, in our own days, it has sent the bread fruit tree to Cayenne, where it is now extensively cultivated. Facts like these, evidently demonstrate the practical utility of these establishments, which are commonly looked upon as exclusively subservient to theoretical studies.

Polypus.—Take the fresh water polype (*Hydra viridis* or *grisea*) a small lump of translucent jelly, about the size of a pea when contracted, but when extended, and viewed under favourable circumstances, lengthened in its body to about three quarters of an inch, and more resembling the finger of a small glove, with a few ravelings round the edge, than any other familiar figure. This creature possesses neither wings nor legs, nor any of the ordinary organs of progression; it is apparently homogeneous in its structure, showing not even a rudiment of bone for leverage, or a semblance of muscle for contraction, and yet it protrudes and withdraws its tentacles, moves from leaf to leaf, travels from plant to plant, from stone to stone, quits the dark and approaches the light side of the vessel in which it may be kept, basks in the sunbeams, enjoys the warmth of summer, becomes torpid during cold weather, and hibernates like the tortoise or the dormouse; retreats if touched, defends itself when attacked, and often attacks in turn; pursues

its prey with avidity, and, although it has neither tongue, nor teeth, nor palate, yet with hungry relish it devours the minute animalcules it can catch; nay, even with cannibal propensities, will force smaller or weaker individuals of its own species into its simple pouch or stomach, digest a part, and then reject the fibres by that single aperture which is both entrance and exit, both mouth and vent to this gastric prototype, which thus absorbs a part of its ingested food and vomits up the rest: such being the natural process in this simple being, to which the higher grades return in many cases of disorder or disease. And yet so finely does this *prima communis via* participate in the peculiarities of digestion, and acknowledge its general laws, that, like the animal stomach of the highest grade which will digest a bone when dead, but cannot act on a pulpy worm when living, this pouch can only feed on prey that has been truly killed. Trembley, I think, it was who observed two hungry polypes fighting which should become the other's meal; or perhaps the little one endeavouring to escape, the greater attempting to devour the less: strength, however, at last prevailed, and this Saturnian polype swallowed at one gulp his son: the little fellow, not being, however, slain, was indigestible, and played such freaks within his living tomb, that the greater one, quite sick at heart, returned his dinner, unhurt, uninjured, to the light of day. But again, the polype has neither eyes nor ears, nor any of the ordinary organs of our senses, and yet it sees and feels, or at least is sensible both to light and touch, and probably to odours and to sound. Every part of this thing's body is equally sensible to the various stimuli which affect its system; it is an eye, an ear all over, but of what a kind!—an eye which sees not, an ear which does not understand; and when vision is to be perfected, the visive function becomes isolated, and the power concentrated to a peculiar organ, which is developed by degrees to its highest point; and as of the eye, so of the ear, the hand, and all the rest.

Ratio of the Births of Males and Females relative to the Age, &c. of the Parents, by Professor Hufacker.

[The following speculation we insert as a curious statistical document. Perhaps some useful additions to the *American System* might be made from it, if the regulation of marriages for the public good, should be supposed to be in the power of Congress.]

1. In marriages, where the mother is older than the father, the number of boys (which generally is in the ratio of 101 : 100) is to that of girls :: 99.6 : 100.
2. When the parents are of the same age, the ratio of the boys to the girls is 92 : 100.
3. If the father be from 3 to 6 years older than the mother, 103.4 boys : 100 girls, nearly the ordinary proportion in Europe.
4. If the father be from 6 to 9 years older than the mother, boys : girls :: 124.7 : 100.
5. If the father be from 9 to 12 or more years older than the mother, boys : girls :: 145.7 : 100.

6. If the father be 18 years and upwards older than the mother, boys : girls :: 200 : 100.

7. Young men, from 24 to 36 years of age, with young women from 16 to 26, change the ratio to 116 6 boys : 100 girls.

8. Young men, with older wives, between 36 and 46 years of age, have boys : girls :: 95 4 : 100.

9. Men of middle age (from 36 to 48 years) with young wives, have boys : girls :: 176 9 : 100.

10. Middle aged men (from 36 to 48 years) with wives of a middle age, have boy : girls :: 114 3 : 100.

11. Middle aged men (from 36 to 48 years) with older wives, have boys : girls :: 109 2 : 100.

12. Older men (from 48 to 60) with young wives, have given no determinable result, on account of the small number of observations.

13. Older men with wives of a middle age, have boys : girls :: 190 : 100.

14. Older men with older wives, boys : girls :: 164 : 100.

Many of the proportions are directly at variance with those of M. Girou de Buzaiengues, and to ascertain the value of them, we should know the data on which they rest, and which have not been given.

Hardy in his Travels in Mexico tells an anecdote of a French marquise, which does credit both to the courage and the *sang froid* of the sex. This lady, it seems, frequently travels as a merchant from one extremity of the Republic to the other, and, in consequence of her well known intrepidity, is often entrusted with the conveyance of large sums of money.

She was once attacked by two or three men, one of whom she shot without ceremony, whereupon the rest thought it advisable to ride away. Arriving at the nearest town on the road to which this event happened, information of which had already preceded her, she was taken before the alcalde; and the two surviving rogues, who had attempted to commit the robbery, now appeared as evidence against her. The alcalde, with great solemnity, said he must commit her to prison. Hereupon our heroine took a loaded pistol from her bosom, which having cocked, she presented at the alcalde, making this observation,—"The man whom I shot attempted to rob me, and if you do not allow me immediately to depart, I have another shot ready for your honour, considering you and the two witnesses accomplices." The case was instantly discharged.

Is the Domestic Cat originally a Native of this Country?—It has for years been a question with naturalists—Is the Wild Cat of Europe the original of our Domestic Cat? Some have referred all the varieties of the house cat to our wild cat; others, as Brehm, Fleming, &c., rejecting this opinion, maintain that the house, or domestic cat, belongs to a wild species no where found in Europe, and that the European wild cat is a peculiar and distinct species. In the former volume of the Journal, vol. vii. p. 369, we noticed the discovery of a species of cat in Nubia, by Ruppel, the *Felis*

maniculata, which he regards as the original stock from which the domestic cat of the Egyptians was derived, and whence, probably, also sprung the domestic cat of Europe. This opinion we consider as probable. However it may turn out as to the species from which the domestic cat originated, there can be little doubt of its being different from our common wild cat, *Felis Catus*.

When we examine the wild cat, we find that it is much larger, has a stronger make, is more powerful, and has a shorter and thicker body and head, than the domestic cat. These distinctions show that the two animals cannot well be considered as belonging to the same species. The great size of the wild cat, in comparison with the tame cat, intimates that they are very different from each other. All wild animals, by domestication, become stronger and larger, which is the reverse of what we observe in the domestic cat. The wild cat, if the domestic cat is derived from it, has become smaller by domestication, which is contrary to all experience, in regard to other animals. A principal proof that the tame cat is not derived from the wild cat, lies from the difference of the tail in these two animals. That of the wild cat is strong, and of nearly uniform thickness, and as if cut off at the end; further, is provided with a tuft of hair and three dark rings, while that of the domestic cat is proportionally much longer, more slender, gradually terminating in a point, and is provided with more than three rings. Further, when we compare the skeleton of both cats, we find, besides other considerable differences, that the tail of the domestic cat has more vertebrae than that of the wild cat.

Where such marked differences occur, we cannot hesitate in believing, that the domestic cat has not originated from our wild cat. If the *Felis maniculata* of Ruppel is the original of our domestic cat, then it follows that probably it was brought at an early period from Nubia into Egypt, from thence to Greece and Italy, and, in course of time, was spread over other countries in Europe. Hence, probably our domestic cat originated in the East, from whence we have obtained the most of our domestic animals.*

On a peculiar Noise heard at Nakuk, on Mount Sinai.—It is known from the reports of travellers, that a low sandstone hill, which runs along the east coast of the bay of Suez, about three hours from Tor in Sinai, gives rise to a remarkable phenomenon. Here, where the ridge is about 150 feet high, there is a steep acclivity named Nakuk, facing the coast, from which there is heard to proceed a striking and very penetrat-

* Dr. Fleming, in his "British Annals," page 15, says, "It is generally believed by naturalists, that the wild cat is the parent stock of the *Felis Catus*, var. *domesticus*, or common house cat. Several circumstances appear to be at variance with this supposition. The tail of the domestic cat tapers to a point, while in the wild cat it terminates abruptly. The head, too, is larger in proportion to the body. The size is much smaller, a character at variance with the ordinary effects of domestication."

ing noise. Seetzen, who, in the year 1810, first noticed this circumstance, says that at first it somewhat resembles the tone of an Æolian harp, afterwards that of a hollow top, and lastly was so loud that the earth seemed to shake. To the imagination of the Arabians, it resembles the tones of El Nakuh, a long board suspended in a horizontal position in the Greek monasteries, and there used instead of a bell, a mode of calling together the devout now nearly prohibited: hence also probably the tale that a monastery is concealed in the hill.

Seetzen, although he has not attempted a full explanation of this sound, maintains that it is produced by the grating of the coarse dry sand along the surface of the rock. This very obvious explanation does not appear to have been considered satisfactory, for we find an English traveller, Mr. Gray, who visited this place in 1818, of another opinion. He considers the grating of the sand not as the cause, but as an effect, of the sound, and maintains, in common with some other travellers, that the sound must, from the existence of hot springs, viz. those of Hamam Faraulm, in the neighbourhood, be of volcanic origin, although he can give no other reason for this opinion.

It is certainly not easy, and probably without experiment not possible, to show how the rolling or sliding of sand down an inclined plane, could produce the remarkable noise heard at Nakuh. Notwithstanding this, the opinion of Seetzen has been confirmed by Professor Ehrenberg, who, in the year 1823, also visited this remarkable place. He ascended from the base of the hill, over its cover of sand, to the summit, where he observed the sand continually renewed by the wearing of the rock; and convinced himself that the motion of the sand was the cause of the sound. Every step he and his companion took caused a partial sound, occasioned by the sand thus set in motion, and differing only in continuance and intensity from that heard afterwards, when the continued ascent had set loose a greater quantity of sand. Beginning with a soft rustling, it passed gradually into a murmuring, then into a humming noise, and at length into a threatening, of such violence, that it could only be compared with a distant cannonade, had it been more continued and uniform. As the sand gradually settled again, the noise also gradually ceased. From the account of Seetzen, it is also known that this noise is often heard when animals run across the sand; also when the wind blows violently, or when loose masses of rock set the sand in motion.

The sand of Nakuh is rather coarse granular, and composed of fragments of transparent quartz.

After the execution of Sir William Stanley, when King Henry visited Lathom, the Earl, when his royal guest had viewed the whole house, conducted him up to the leads for a prospect of the country. The Earl's fool, who was among the company, observing the King draw near to the edge of the leads not guarded with a balustrade, stepped up to the Earl, and pointing down to the precipice, said

"Tom, remember Will." The King understood the meaning, and made all haste down stairs, and out of the house; and the fool long after seemed mightily concerned that his lord had not had courage to take that opportunity of avenging himself for the death of his brother.

Peculiar Cultivation of Potatoes.—A French soldier placed half a dozen potatoes at the bottom of a cask upon a layer of sand and fresh earth, three or four inches thick; when the stalks had risen a few inches, he bent them down and covered them, four or five inches deep, with the same mixture. He continued this operation until the cask was full. Six or seven months after, upon emptying the vessel, (which stood in a court-yard,) he found that the half dozen potatoes had produced an enormous quantity of new ones from the portions of the mother stems which had been successively laid down and covered.—*Jour. des Connaiss. Usuelles*, 1829, p. 66.

On the Vegetating Wasp of Guadaloupe, by M. J. B. Ricord-Madianna.—Botanists and entomologists know that particular productions which have been recognised as cryptogamous plants, many of which have been referred to the genus *Sphæria*, are frequently met with on dead insects, and are preserved in collections; but it has been thought that these plants developed themselves on insects deprived of life. M. Ricord, however, states, that he has observed at Guadaloupe a nest of Wasps, the greatest number of which were encumbered with these excrescences. As they quitted the nest, they fell upon the ground, and could not rise again on account of the weight of the plant, which had taken root on some part or other of their body, particularly on the sternum. Having observed the larvæ contained in the cells, M. Ricord remarked, that they also had this small cryptogamous appendage, but then it was very small. This species appears to be the *Sphæria entomorbiosa* of the English botanists.—*Journal du Pharmacien*.

Chinese Canal.—A canal was opened in 1826, to the west of Sargan, in Cochin China, which connected that town with a branch of the river Cambodja. Its length was 23 miles, its width 80 feet, and its depth 12 feet. This canal was begun and finished in six weeks, although it had to be carried through large forests and over extensive marshes: 20,000 men were at work upon it day and night, and it is said that 7000 died of fatigue. The sides of the canal were soon covered with palm-trees, for the cultivation of which the Chinese pursue a particular method.

Egyptian Newspaper.—Among his other improvements, the Pasha of Egypt, besides sending young men to Europe to pursue their studies, has commenced a newspaper at Boulaq, the port of Cairo, which is published twice a week. It is entitled "News of Egypt," of the common folio form, and in two columns, the one Turkish and the other Arabic.

Literary Union.—This body has increased to nearly five hundred members. A portion of the house in Waterloo-place is already opened, and regularly attended by the society. The objects of the Literary Union are extensive, and will be of singular utility to all who are attached to mental pursuits, or to the company of literary men and artists. A library, a museum, soirées, and branch clubs, are among the objects contemplated in the scheme; which is not confined merely to eating, drinking, and reading newspapers. A little time will develop its objects, and show it to be of the highest importance to the classes which it more immediately embraces. Viscount Torrington, John Gibson Lockhart, Esq. T. Barnes, Esq. and Sir George Staunton, Bart. have been added to the committee.

Literary Intelligence.

Mr. Thomas Campbell is at present engaged in writing the Life of his late lamented friend Sir Thomas Lawrence, to which will be added the Correspondence of the late President with numerous distinguished Characters, including notices of many of his Contemporaries, and a variety of particulars of much interest to all lovers of the Fine Arts.

The Marquess of Londonderry has just completed his new work, embracing the last memorable campaigns in Germany and France. That a detailed history of such a war should not yet have appeared, is certainly not a little extraordinary; and it must be gratifying, at least to our military circles, to find the desideratum about to be supplied by an eye-witness and a soldier. As an accredited minister and representative of British interests at the head-quarters of the Allied Sovereigns, as well as in his military capacity, Lord Londonderry had ample opportunities of obtaining the most complete and correct information, with full access to those councils which developed the secret views and objects of the various conflicting parties that prevailed at that eventful period.

A new novel of fashionable life, under the title of *Sydenham, or Memoirs of a Man of the World*, will shortly be given to the public. It exhibits, we are informed, the history of a young man of rank and fortune, who, being of a decidedly satirical turn, resolves to gratify his favourite penchant to ascertain the internal state of fashionable society, and minutely to observe human nature under every variety of shade and circumstance. Among other characters with whom he comes in contact, is the celebrated Brummell, who figures under the name of Beaumont: this gentleman arrests his peculiar attention, and serves him for a complete study. The work is, moreover, illustrative of those sets or circles in the world of *ton* which have never been depicted in the pages of fiction, and respecting which so much curiosity has long been felt.

Nearly ready, *Personal Memoirs of Pryce Gordon, Esq.* This work, we learn, will contain the Recollections of the Author, embracing Sketches of a variety of celebrated individuals, which have come under his observation

during a period of fifty years. It promises to be on a par, as to wit and vivacity, with Sir John Barrington's celebrated *Sketches*.

The Family Classical Library.—The second volume of this valuable publication, consisting of Translations of the most celebrated Greek and Roman Historians, Poets, Orators, &c. is just ready for publication. It comprises the conclusion of the *Orations of Demosthenes*, and the whole of *Sallust*, with two portraits. In this important undertaking, it is proposed to adopt those translations which have obtained the most general credit, and occasionally (where it may seem requisite) to present an entirely new version of an author from some pen of acknowledged excellence; a plan which cannot fail to be generally approved, and which will doubtless procure ere long for the "wisdom of the ancients" that advantage which it ought to possess—a prominent place in modern popular literature.

A new novel, from the pen of Mr. Horace Smith, may be expected early in the ensuing month. It is a Tale of the Court of James II. Among the characters who have a prominent place in the work, besides the king himself, are Lord and Lady Sunderland, the Duchess of Portsmouth, Sir Charles Sedley, and his daughter, the Countess of Dorchester, Count Grammont, the Prince of Orange, Dryden, Shadwell, Judge Jeffries, &c.

The distinguished success of certain modern novelists, and the increasing appetite of the public for works of fiction, it appears, has roused the latent talent of one of the oldest and most eminent practitioners in the art. We allude to the author of "*Caleb Williams*," who has just ready for publication a novel, entitled *Cloudesley*, and which will doubtless be looked for with the highest interest.

Sir Edmond Temple's *Travels in Peru* are at length nearly ready for publication. They include a Year's Residence at Potosi, and are said to throw much light on the Mining Speculations in that country.

The second and concluding volume of the *Reminiscences of Henry Angelo* will speedily appear. Among other royal and noble persons of whom anecdotes and particulars will be given in this work, are the following:—His present Majesty, the Duke of Sussex, the Duke of Kent, the Duke of Bedford, the Duke of Manchester, the Duke of Saint Albans, the Margravine of Anspach, Lord Archibald Hamilton, Lady Hamilton, Lord Byron, Lord Barrymore, Lord Guildford, Duchess of Devonshire, Marquis of Sligo, Duchess of Gordon, Marquis of Anglesea, Duchess of Ancaster, Honourable Keppel Craven, Honourable Mr. Anstruther.

Tales of the Colonies, from the pen of W. Howison, Esq. the well known author of "*Sketches of Canada*," are daily expected. The scenery and descriptions of the British Colonies are said to be drawn in the most forcible and picturesque colours.

The Oxonians, a novel, from the clever pen of the author of "*The Rôuë*," may be shortly expected.

The third volume of the *Correspondence of Dr. Doddridge* is in a state of forwardness. It includes, we understand, Letters of the most distinguished individuals of his time, and consequently assumes a higher degree of importance than the preceding volumes.

A novel, entitled *Frescati's*, from the pen of one of our leading fashionables, is in preparation. It develops, we are told, in the most able manner, the gay routine of high life in the French metropolis.

Field Sports of the North of Europe, including a Residence in Norway and Sweden, by L. Lloyd, Esq. are on the point of publication. The diversified and perilous adventures of the author, whilst pursuing his favourite pastime with all the enthusiasm of a true sportsman, are detailed, we understand, in the most vivid and animated manner. The scenery of those countries is likewise very forcibly described.

The *Correspondence and Diary of Ralph Thoresby*, so long announced, are at length just ready for publication. The name of Thoresby has long been familiar to the public ear. In the antiquarian literature of the country he ranks deservedly high. His *Ducatus Leodiensis*, or *Topography of Leeds*, has always been a book prized and popular; and there is scarcely an antiquary, or a distinguished naturalist of his time, with whom he was not intimately acquainted, and among others, with Nicolson, Gibson, the Gales, Smith, Hickes, Strype, Hearne, and Baker. But perhaps he is best known as the possessor of a very extensive and curious Museum, in which were deposited the rarest specimens of art and nature. This work may consequently be expected to contain a variety of original and curious notices of nearly all the literary and scientific characters who flourished at the close of the 17th, and at the beginning of the 18th centuries.

A new work, by the authoress of "*Hungarian Tales*," is about to make its appearance, under the piquant title of *The Manners of the Day*. Dress, affectation, scandal, amusement, flirtation, the more serious, though too often guilty, affairs of the heart, with all the dangerous varieties of dissipation common to splendid mansions and gilded palaces, are the subjects which, with a highly moral purpose, have been chosen by the fair writer as materials for her tale.

M. Caillie's *Travels to Timbuctoo* will appear in a few days. Among the geographical problems which, during the last half century, have occupied the attention of the world, and awakened a spirit of enterprise and adventure, the existence of a large and populous city in the heart of Central Africa stands pre-eminent. To decide this long agitated question, various expeditions have been fitted out, but without success. In vain have Houghton, Browne, Horneman, Park, Tuckey, Peddie, Campbell, Gray, Ritchie, Bowditch, Oudney, Clapperton, Denham, and Laing—in vain have Burckhardt, Beaufort, Mollie, and Belzoni endeavoured to remove the veil that enveloped this mysterious city. Of this number Major Laing alone reached the desired goal, but through the barbarous

murder of that officer, the results of his persevering exertions have been unhappily lost to his country. M. Caillie is the first European who has been enabled to penetrate to Timbuctoo, and to return to Europe with full and accurate information respecting this hitherto unknown capital.

Carwell, or Crime and Sorrow, a novel, the production of a lady of distinction, which will shortly be published, will, it is said, from the affecting nature of the story, vie with the beautiful tale of Mrs. Opie.

The *Life of Bishop Heber*, with Selections from his *Correspondence*, and from his unpublished works, (with a portrait,) by his widow, will shortly appear.

The *Papers of the Earl of Marchmont*, comprising a variety of Original and unknown Documents, Diaries, &c. illustrative of the reign of Queen Anne, George I. &c. is in the press.

A *Life of Sir Isaac Newton*, by David Brewster, LL.D. is in the press.

The *Political Life of the Right Hon. George Canning*, from his acceptance of the Seals of the Foreign Department, in 1822, to his death, by A. C. Granville, Esq. late his Private Secretary, is in the press.

Excerpta Historica; or, Illustrations of English History. The object of this work is to elucidate public events, domestic and foreign, our ancient relations with France, Spain and other nations, the laws and constitution of England, the state of the Navy and Army, the economy of the Royal Household, the splendour, magnificence, and personal character of our Monarchs, the history of Monastic Embellishments, the lives of distinguished men, the costume, modes of living, manners and customs of our ancestors, the moral and political condition of society, the state of language and literature, the introduction and progress of the Arts, Heraldry, Courts of Chivalry, and Genealogy: in short, to collect whatever may present vividly to the mind the characteristic features of former ages. This collection will undoubtedly prove of the utmost consequence to Historians and Antiquaries; and, indeed, to men of letters generally. It is to be published in royal 8vo., in Quarterly Parts, of not less than one hundred pages, illustrated by woodcuts. Part I. will appear in March.

The *Portraits of the Countess Gower*, the Hon. Mrs. Hope, and Lady Charlotte Bury, from paintings by Sir Thomas Lawrence, will form the earliest of the forthcoming embellishments of *La Belle Assemblée*, in continuation of its series of the *Portraits of the Female Nobility*, now in progress.

Memoirs of Sir James Campbell, of Ardkinglass, written by Himself. In 2 vols.

Sir Ralph Esher, or Memoirs of a Gentleman of the Court of Charles II.

Personal Memoirs of Pryce Gordon, Esq. In 2 vols. 8vo.

Personal Memoirs of Captain Cooke. Written by Himself, in 2 vols.

The *Correspondence of Sir John Sinclair*, Bart. In 2 vols.

The Private Correspondence of John Pinkerton, Esq. Edited by Dawson Turner, Esq. In 2 vols.

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Lives of British Painters. Vol. ii. By Allan Cunningham, will contain Memoirs of West, Opie, Barry, Blake, Bird, Fuseli, Raeburn, &c. &c.

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The Field Sports of the North of Europe; including a personal Narrative of a Residence in Norway and Sweden. By L. Lloyd, Esq. In 2 vols. 8vo.

Letters from Switzerland and Italy. By John Carne, Esq.

Mr. Richard Howitt is about to publish a volume entitled *The Book of the Seasons*, to contain much useful information on a variety of topics peculiar to each month, accompanied with poetical introductions from the pen of his accomplished and highly-gifted lady. They are members of the society of Friends, and reside at Nottingham.

A work of vast importance is announced by Messrs. Wesley and Davis: *A Voyage Round the World*. It will be remembered that some years ago, Mr. Bennet, of Sheffield, and the Rev. Daniel Tyerman, undertook this voyage at the instance of the London Missionary Society. The clergyman did not live to revisit his country; but happily the layman returned, having gathered in an abundant harvest to satisfy the longings of his countrymen. The work is to be edited by James Montgomery, Esq.

A gentleman of the name of Bannister is about to publish a volume, the object of which is to prevent the Destruction of the Aborigines, usually incident upon the settling of new colonies.

A sheet has recently been published, containing all the Books and Prints, good, bad, and indifferent, that have been issued by the various London publishers, from the 1st of January to the 31st of December, 1829. It is a curious and amusing document; in looking over it, one is astonished that so many works could ever have found readers, much less, purchasers. We confess, however, that we have been thus introduced to a considerable portion of them, for the first time; and have bowed them out with but little expectation of ever again meeting with them, unless under the immediate surveillance of a modern Caxton, who deems it unnecessary and inexpedient to keep a roof over their heads.

Colonel James Welsh of the Madras Army, has now in the press, *A Journal of Occurrences and Events, during a residence of nearly forty years in the East Indies*; to be illustrated with nearly one hundred plates.

The sixth and concluding part of Captain Grindlay's *Views in India*, is nearly ready for publication, and will contain, with the usual number of plates, a general index to the whole series.

Journal of a Nobleman at the Congress of Vienna. In 2 vols. post 8vo.

Mrs. Bray, author of "*De Foix*," "*The White Hoods*," "*The Protestant*," &c., has a novel in the press, entitled, *Fitz of Fitz Ford*, founded on a popular and interesting Legend of Devonshire.

A model of A Steam Carpenter, by which boards or planks are planed, grooved and tongued, at one operation, is exhibited at the hall of the Franklin Institute, Philadelphia.

Family Sermons, by the Editor of "*The Christian Observer*," are announced.

Mr. Bucke's *Epic Drama of Julio Romano*, or the Display of the Passions, will be published early in February. It will be accompanied by an historic memoir, giving an account of the proceedings in Parliament last session, on the claims of dramatic writers; remarks on the present state of the stage, and the author's correspondence with various persons. To which will be added an Appendix, stating the manner in which dramatic writers are rewarded in Russia, Germany, and France.

The Rev. Hobart Caunter is preparing for publication, in one vol. post octavo, a poem entitled *The Island Bride*, with an Illustration by Martin.

The Lost Heir, a novel, which has truth for its basis, will be published in a few days.

Charity Bazaars, a poem, is just ready. The author, we understand, is a near relation to the noble author of *Matilda*, and *Yes and No*.

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Engraved by J. B. Longacre.

MARY QUEEN OF SCOTS,
ON THE EVE PREVIOUS TO HER EXECUTION.

Engraved for the Private copies of the Library Edition. — In Water England, vol. III. No. 111.

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